**Standards Map for Kindergarten Through Grade Eight**

**Grade K – California Next Generation Science Standards**

**K-LS1 From Molecules to Organisms: Structures and Processes**

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Analyzing and Interpreting Data**  Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.   * Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1) | **KEY:**  **M = Module**  **DQ = Driving Question**  **L = Lesson**  **TE = Teacher Edition**  **TB = Student Edition known as the Twig Book**  **LR = Leveled Reader**  **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ2  L2 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=58), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=18))  L3 ([TE pp. 50–57](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=64), [TB p. 17](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=20))  L4 ([TE pp. 58–65](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=72), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=21))  L7 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=92), [TB pp. 23–25](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=26))  L9 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=104), [TB pp. 28–30](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=31))  Key Resources  L3 **Rain** audio clip; **Looking for Plants: Rain** video  L4 **Looking for Plants: River** video  L7 **Looking for Plants: Cave** video  L9 **How Do Plants Survive?** video  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ3  L3 ([TE pp. 124–129](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=138), [TB p. 46](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=49))  L5 ([TE pp. 138–146](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=152), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=52))  Key Resources  L3 **What Do Animals Eat?** video  L5 **Sharing Water** video;  **What Do Animals Need?** quiz; **Human Wants and Needs Images** handout  **EXAMPLE THREE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ4  L1 ([TE pp. 152–157](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=166), [TB pp. 53–55](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=56))  L2 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=172), [TB pp. 56–57](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=59))  Key Resources  L2 **Life Under a Rock** video; **Where Do Animals Live?** quiz  **EXAMPLE FOUR**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L1 ([TE pp. 186–193](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=200), [TB pp. 67–70](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=70))  L2 ([TE pp. 194–201](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=208), [TB pp. 71–73](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=74))  L3 ([TE pp. 202–209](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=216), [TB pp. 74–76](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=77))  L4 ([TE pp. 210–215](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=224), [TB pp. 77–79](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=80))  L5 ([TE pp. 216–223](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=230), [TB pp. 80–82](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=83))  L6 ([TE pp. 224–229](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=238), [TB pp. 83–84](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=86))  L7 ([TE pp. 230–234](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=244), [TB pp. 85–86](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=88))  Key Resources  L1 **Dung Beetle** video; **Adventure in the Desert** video  L3 **Adventure in a Grassland** video; **Agama Lizard** video  L5 **Who Lives Here?** Read-Aloud text  L6 **Peregrine Falcon** video  **EXAMPLE FIVE**  **Grade K Module 1**  **Leveled Reader: The Friendly Kakapo**  All chapters ([LR 2–29](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform))  Associated lessons ([TE 256–271](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=256), [TB 99–105](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=102)) | **K-LS1-1.**  **Use observations to describe patterns of what planets and animals (including humans) need to survive.** [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and that all living things need water.] | **KEY:**  **M = Module**  **DQ = Driving Question**  **L = Lesson**  **TE = Teacher Edition**  **TB = Student Edition known as the Twig Book**  **LR = Leveled Reader**  **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ2  L3 ([TE pp. 50–57](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=64), [TB p. 17](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=20))  L4 ([TE pp. 58–65](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=72), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=21))  L5 ([TE pp. 66–71](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=80), [TB p. 20](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=23))  L6 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=86), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=24))  L7 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=92), [TB pp. 23–25](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=26))  L8 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=98), [TB pp. 26–27](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=29))  L9 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=104), [TB pp. 28–30](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=31))  L10 ([TE pp. 96–102](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=110), [TB pp. 31–34](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=34))  Key Resources  L3 **Rain** audio clip  L4 **Looking for Plants: Rain** video; 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|  | ***Connections to Nature of Science***  **Scientific Knowledge is Based on Empirical Evidence**  Scientists look for patterns and order when making observations about the world. (K-LS1-1) | **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ2  L2 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=58), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=18))  L9 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=104), [TB pp. 28–30](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=31))  Key Resources  L9 **How Do Plants Survive?** video  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L8 ([TE pp. 236–240](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=250), [TB pp. 87–88](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=90))  **EXAMPLE THREE**  **Grade K Module 1**  **Leveled Reader: The Friendly Kakapo**  Chapter 2 ([LR pp.14–21](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform&page=16))  Associated lesson ([TE pp. 247–252](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=261), [TB pp. 101–103](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=104))  Chapter 3 ([LR pp. 22–29](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform&page=24))  Associated lesson ([TE pp. 253–257](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=267), [TB pp. 104–105](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=107)) |
| **DCI** | **LS1.C: Organization for Matter and Energy Flow in Organisms**   * All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1) | **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ2  L3 ([TE pp. 50–57](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=64), [TB p. 17](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=20))  L4 ([TE pp. 58–65](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=72), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=21))  L5 ([TE pp. 66–71](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=80), [TB p. 20](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=23))  L6 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=86), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=24))  L7 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=92), [TB pp. 23–25](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=26))  L8 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=98), [TB pp. 26–27](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=29))  L9 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=104), [TB pp. 28–30](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=31))  L10 ([TE pp. 96–102](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=110), [TB pp. 31–34](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=34))  Key Resources  L3 **Rain** audio clip; **Looking for Plants: Rain** video  L4 **Looking for Plants: River** video  L5 **Watering Plants** video  L7 **Looking for Plants: Cave** video  L9 **How Do Plants Survive?** video  L10 **Plant Needs—Odd One Out** video  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ3  L1 ([TE pp. 108–115](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=122), [TB pp. 37–41](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=40))  L2 ([TE pp. 116–123](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=130), [TB pp. 42–45](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=45))  L3 ([TE pp. 124–129](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=138), [TB p. 46](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=49))  L4 ([TE pp. 130–137](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=144), [TB pp. 47–48](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=50))  L5 ([TE pp. 138–146](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=152), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=52))  Key Resources  L3 **What Do Animals Eat?** video  L5 **Sharing Water** video; **What Do Animals Need?** quiz  **EXAMPLE THREE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ4  L1 ([TE pp. 152–157](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=166), [TB pp. 53–55](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=56))  L2 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=172), [TB pp. 56–57](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=59))  L4 ([TE pp. 172–178](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=186), [TB pp. 59–64](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=62))  **EXAMPLE FOUR**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L8 ([TE pp. 236–240](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=250), [TB pp. 87–88](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=90))  **EXAMPLE FIVE**  **Grade K Module 1**  **Leveled Reader: The Friendly Kakapo**  Chapter 1 ([LR pp. 2–13](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform&page=4))  Associated lesson ([TE pp. 242–246](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=256), [TB pp. 99–100](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=102)) |
| **CCC** | **Patterns**   * Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1) | **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ2  L1 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=52), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=16))  L2 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=58), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=18))  L4 ([TE pp. 58–65](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=72), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=21))  L7 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=92), [TB pp. 23–25](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=26))  L8 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=98), [TB pp. 26–27](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=29))  L9 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=104), [TB pp. 28–30](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=31))  L10 ([TE pp. 96–102](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=110), [TB pp. 31–34](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=34))  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ3  L3 ([TE pp. 124–129](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=138), [TB p. 46](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=49))  L5 ([TE pp. 138–146](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=152), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=52))  Key Resources  L3 **What Do Animals Eat?** video,  L5 **Sharing Water** video; **What Do Animals Need?** quiz  **EXAMPLE THREE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L8 ([TE pp. 236–240](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=250), [TB pp. 87–88](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=90))  **EXAMPLE FOUR**  **Grade K Module 1**  **Leveled Reader: The Friendly Kakapo**  Chapter 1 ([LR pp. 2–13](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform&page=4))  Associated lesson ([TE pp. 242–246](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=256), [TB pp. 99–100](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=102))  Chapter 3 ([LR pp. 22–29](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform&page=24))  Associated lesson ([TE pp. 253–257](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=267), [TB pp. 104–105](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=107)) |  |  |

California Department of Education

**K-ESS2 Earth’s Systems**

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Analyzing and Interpreting Data**  Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.   * Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=28), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=16))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30))  Key Resources  L2 **My Favorite Weather** Prior-Knowledge Read-Aloud text; **Weather Forecast** video; **Weather Symbols** visual; **Snow—Big Reveal** video  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=86), [TB pp. 31–32](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=34))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=98), [TB pp. 34–37](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=37))  Key Resources  L1 **What Is the Weather Like?** video  **EXAMPLE THREE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=128), [TB pp. 47–48](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=50))  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L3 ([TE pp. 126–131](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=140), [TB pp. 50–52](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=53))  L5 ([TE pp. 138–143](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=152), [TB pp. 55–56](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=58))  L6 ([TE pp. 144–148](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=158), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=60))  Key Resources  L5 **Weather Data Sheet; Weather Table** visual; **Meteorologists** video  **EXAMPLE FOUR**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  Key Resources  L2 **Severe Weather** video; **Severe Weather Symbols** visual  **EXAMPLE FIVE**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  Chapter 3 ([LR pp. 20–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform&page=24))  Associated lesson ([TE pp. 192–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=206)) | **K-ESS2-1.**  **Use and share observations of local weather conditions to describe patterns over time.**  [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.] [*Assessment Boundary: Assessment of quantitative observations is limited to whole numbers and relative measures such as warmer/cooler*.] | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=28), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=16))  Key Resources  L2 **My Favorite Weather** Prior-Knowledge Read-Aloud text; **Weather Forecast** video; **Weather Symbols** visual; **Snow—Big Reveal** video  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=86), [TB pp. 31–32](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=34))  L2 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=92), [TB p. 33](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=36))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=98), [TB pp. 34–37](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=37))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=104), [TB pp. 38–39](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=41))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=110), [TB pp. 40–41](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=43))  L6 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=116), [TB pp. 42–44](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=45))  Key Resources  L1 **What Is the Weather Like?** video  L2 **Weather Song** video (optional); **What Is the Weather Like?** video; **Kinds of Weather**  Read-Aloud text    **EXAMPLE THREE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=128), [TB pp. 47–48](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=50))  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L3 ([TE pp. 126–131](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=140), [TB pp. 50–52](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=53))  L4 ([TE pp. 132–137](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=146), [TB pp. 53–54](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=56))  L5 ([TE pp. 138–143](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=152), [TB pp. 55–56](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=58))  L6 ([TE pp. 144–148](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=158), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=60))  Key Resources  L5 **Weather Data Sheet; Weather Table** visual; **Meteorologists** video  **EXAMPLE FOUR**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  Chapter 2 ([LR pp.10–19](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform&page=16))  Associated lesson ([TE pp. 186–191](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=200))  Chapter 3 ([LR pp. 20–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform&page=24))  Associated lesson ([TE pp. 192–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=206)) |
| **SEP** | ***Connections to Nature of Science***  **Scientific Knowledge is Based on Empirical Evidence**   * Scientists look for patterns and order when making observations about the world. (K-ESS2-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=104), [TB pp. 38–39](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=41))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=110), [TB pp. 40–41](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=43))  L6 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=116), [TB pp. 42–44](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=45))  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=128), [TB pp. 47–48](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=50))  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L3 ([TE pp. 126–131](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=140), [TB pp. 50–52](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=53))  L5 ([TE pp. 138–143](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=152), [TB pp. 55–56](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=58))  L6 ([TE pp. 144–148](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=158), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=60))  **EXAMPLE THREE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L1 ([TE pp. 154–159](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=168), [TB pp. 61–70](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=64))  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79)) |
| **DCI** | **ESS2.D: Weather and Climate**   * Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=28), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=16))  Key Resources  L2 **My Favorite Weather** Prior-Knowledge Read-Aloud text; **Weather Forecast** video  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=86), [TB pp. 31–32](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=34))  L2 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=92), [TB p. 33](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=36))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=98), [TB pp. 34–37](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=37))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=104), [TB pp. 38–39](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=41))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=110), [TB pp. 40–41](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=43))  L6 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=116), [TB pp. 42–44](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=45))  Key Resources  L1 **What Is the Weather Like?** video  L2 **Kinds of Weather**  Read-Aloud text  **EXAMPLE THREE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L3 ([TE pp. 126–131](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=140), [TB pp. 50–52](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=53))  L4 ([TE pp. 132–137](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=146), [TB pp. 53–54](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=56))  L5 ([TE pp. 138–143](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=152), [TB pp. 55–56](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=58))  L6 ([TE pp. 144–148](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=158), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=60))  Key Resources  L5 **Meteorologists** video  **EXAMPLE FOUR**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L1 ([TE pp. 154–159](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=168), [TB pp. 61–70](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=64))  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  **EXAMPLE FIVE**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform))  Associated lessons ([TE pp. 180–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=194)) |
| **CCC** | **Patterns**   * Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=28), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=16))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  Key Resources  L2 **My Favorite Weather** Prior- Knowledge Read-Aloud text; **Weather Forecast** video  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=86), [TB pp. 31–32](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=34))  L2 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=92), [TB p. 33](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=36))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=98), [TB pp. 34–37](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=37))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=104), [TB pp. 38–39](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=41))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=110), [TB pp. 40–41](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=43))  L6 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=116), [TB pp. 42–44](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=45))  Key Resources  L1 **What Is the Weather Like?** video  L2 **Kinds of Weather**  Read-Aloud text  **EXAMPLE THREE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=128), [TB pp. 47–48](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=50))  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L3 ([TE pp. 126–131](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=140), [TB pp. 50–52](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=53))  L4 ([TE pp. 132–137](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=146), [TB pp. 53–54](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=56))  L5 ([TE pp. 138–143](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=152), [TB pp. 55–56](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=58))  L6 ([TE pp. 144–148](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=158), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=60))  Key Resources  L5 **Meteorologists** video  **EXAMPLE FOUR**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform)) Associated lessons ([TE pp. 180–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=194)) |

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Engaging in Argument from Evidence**  Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).   * Construct an argument with evidence to support a claim. (K-ESS2-2) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ1  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=70), [TB pp. 19–26](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=22))  Key Resources  L9 **Beaver Builders** video; **Beaver Claims** Read-Aloud text  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=86), [TB p. 31](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=34))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=104), [TB p. 36](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=39))  Key Resources  L4 **Leaf Litter** video; **Leaf System** visual  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L2 ([TE pp. 120–125](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=134), [TB pp. 51–53](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=54))  L4 ([TE pp. 134–139](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=148), [TB p. 56](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=59))  Key Resources  L2 **How Is Paper Made?** video  **EXAMPLE FOUR**  **Grade K Module 4**  **Leveled Reader: Animal Builders**  Chapter 3 ([LR pp. 22–29](https://resource.twigscience.com/book.html?id=005441830e0c207f329a0&authid=gAxUg22tD8zz&cid=tsplatform&page=24))  Associated lesson ([TE pp. 216–221](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=230), [TB pp. 86–87](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=89)) | **K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.** [Clarification Statement: Examples of plants and animals changing their environment could include how a squirrel digs in the ground to hide its food and tree roots can break concrete.] | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ1  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=40), [TB pp. 11–12](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=14))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=46), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=16))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=52), [TB p. 15](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=18))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=58), [TB pp. 16–17](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=19))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=64), [TB p. 18](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=21))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=70), [TB pp. 19–26](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=22))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=76), [TB pp. 27–28](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=30))  Key Resources  L4 **Earthworm Tunneling** video  L5 **A Day in the Life of an Earthworm** video  L7 **Beaver—Jigsaw Puzzle** video; **It’s a Beaver!** video  L9 **Beaver Builders** video; **Beaver Claims** Read-Aloud text  L10 **Animals Can Change their Environment** video  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ2  L2 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=92), [TB pp. 32–34](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=35))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=98), [TB p. 35](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=38))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=104), [TB p. 36](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=39))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=110), [TB pp. 37–44](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=40))  L6 ([TE pp. 102–106](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=116), [TB pp. 45–46](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=48))  Key Resources  L4 **Leaf Litter** video; **Leaf System** visual  L5 **Roots—Big Reveal** video; **Tree Roots** visual; **Roots Refrain** visual; **Roots, Good or Bad?** Read-Aloud text  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L2 ([TE pp. 120–125](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=134), [TB pp. 51–53](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=54))  L3 ([TE pp. 126–132](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=140), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=57))  L4 ([TE pp. 134–139](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=148), [TB p. 56](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=59))  L5 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=154), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=60))  L6 ([TE pp. 146–150](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=160), [TB pp. 59–60](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=62))  Key Resources  L2 **How Is Paper Made?** video  L3 **Deforestation** visual; **Disappearing Forests** video  L5 **Irrigation** video  **EXAMPLE FOUR**  **Grade K Module 4**  **Leveled Reader: Animal Builders**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=005441830e0c207f329a0&authid=gAxUg22tD8zz&cid=tsplatform))  Associated lessons ([TE pp. 204–221](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=218), [TB pp. 81–87](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=84)) |
| **DCI** | **ESS2.E: Biogeology**   * Plants and animals can change their environment. (K-ESS2-2) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=22), [TB pp. 3–8](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=6))  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=28), [TB p. 9](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=12))  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=34), [TB p. 10](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=13))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=40), [TB pp. 11–12](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=14))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=46), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=16))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=52), [TB p. 15](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=18))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=58), [TB pp. 16–17](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=19))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=64), [TB p. 18](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=21))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=70), [TB pp. 19–26](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=22))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=76), [TB pp. 27–28](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=30))  Key Resources  L4 **Earthworm Tunneling** video  L5 **A Day in the Life of an Earthworm** video  L7 **Beaver—Jigsaw Puzzle** video; **It’s a Beaver!** video  L9 **Beaver Builders** video, **Beaver Claims** Read-Aloud text  L10 **Animals Can Change their Environment** video  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=86), [TB p. 31](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=34))  L2 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=92), [TB pp. 32–34](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=35))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=98), [TB p. 35](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=38))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=104), [TB p. 36](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=39))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=110), [TB pp. 37–44](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=40))  L6 ([TE pp. 102–106](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=116), [TB pp. 45–46](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=48))  Key Resources  L4 L**eaf Litter** video; **Leaf System** visual  L5 **Roots—Big Reveal** video; **Tree Roots** visual; **Roots Refrain** visual; **Roots, Good or Bad?** Read-Aloud text  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L2 ([TE pp. 120–125](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=134), [TB pp. 51–53](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=54))  L3 ([TE pp. 126–132](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=140), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=57))  L4 ([TE pp. 134–139](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=148), [TB p. 56](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=59))  L5 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=154), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=60))  L6 ([TE pp. 146–150](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=160), [TB pp. 59–60](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=62))  Key Resources  L2 **How Is Paper Made?** video  L3 **Deforestation** visual; **Disappearing Forests** video  L5 **Irrigation** video |
| **DCI** | **ESS3.C: Human Impacts on Earth Systems**   * Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary to K-ESS2-2) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L2 ([TE pp. 120–125](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=134), [TB pp. 51–53](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=54))  L3 ([TE pp. 126–132](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=140), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=57))  L4 ([TE pp. 134–139](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=148), [TB p. 56](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=59))  L5 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=154), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=60))  L6 ([TE pp. 146–150](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=160), [TB pp. 59–60](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=62))  Key Resources  L2 **How Is Paper Made?** video  L3 **Deforestation** visual; **Disappearing Forests** video  L5 **Irrigation** video  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ4  L1 ([TE pp. 156–161](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=170), [TB p. 63](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=66))  L2 ([TE pp. 162–167](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=176), [TB pp. 64–66](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=67))  L3 ([TE pp. 168–173](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=182), [TB pp. 67–68](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=70))  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  Key Resources  L2 **Recycled Object** visual; **Reduce, Reuse, Recycle** video; **Reduce, Reuse, Recycle Snap** game  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82))  L4 ([TE pp. 198–202](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=212), [TB p. 80](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=83))  Key Resources  L1 **I Can** text ([TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76)) |
| **CCC** | **Systems and System Models**   * Systems in the natural and designed world have parts that work together. (K-ESS2-2) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=22), [TB pp. 3–8](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=6))  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=28), [TB p. 9](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=12))  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=34), [TB p. 10](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=13))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=40), [TB pp. 11–12](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=14))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=46), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=16))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=64), [TB p. 18](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=21))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=70), [TB pp. 19–26](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=22))  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=86), [TB p. 31](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=34))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=98), [TB p. 35](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=38))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=104), [TB p. 36](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=39))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=110), [TB pp. 37–44](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=40))  L6 ([TE pp. 102–106](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=116), [TB pp. 45–46](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=48))  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L2 ([TE pp. 120–125](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=134), [TB pp. 51–53](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=54))  L3 ([TE pp. 126–132](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=140), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=57))  L4 ([TE pp. 134–139](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=148), [TB p. 56](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=59))  L5 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=154), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=60))  L6 ([TE pp. 146–150](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=160), [TB pp. 59–60](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=62))  Key Resources  L5 **Irrigation** video |

**K-ESS3 Earth and Human Activity**

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| --- | --- | --- | --- | --- |
| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Developing and Using Models**  Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, storyboard) that represent concrete events or design solutions.   * Use a model to represent relationships in the natural world. (K-ESS3-1) | **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ4  L2 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=172), [TB pp. 56–57](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=59))  Key Resources  L2 **Life Under a Rock** video  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L2 ([TE pp. 194–201](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=208), [TB pp. 71–73](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=74))  L4 ([TE pp. 210–215](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=224), [TB pp. 77–79](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=80))  L6 ([TE pp. 224–229](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=238), [TB pp. 83–84](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=86))  L8 ([TE pp. 236–240](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=250), [TB pp. 87–88](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=90))  Key Resources  L5 **Who Lives Here?** Read-Aloud text  L6 **Peregrine Falcon** video | **K-ESS3-1.**  **Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.** [Clarification Statement: Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas; and grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.] | **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ4  L2 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=172), [TB pp. 56–57](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=59))  L3 ([TE pp. 164–171](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=178), [TB p. 58](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=61))  Key Resources  L2 **Life Under a Rock** video  L3 **Damselfly** video  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L1 ([TE pp. 186–193](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=200), [TB pp. 67–70](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=70))  L2 ([TE pp. 194–201](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=208), [TB pp. 71–73](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=74))  L3 ([TE pp. 202–209](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=216), [TB pp. 74–76](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=77))  L4 ([TE pp. 210–215](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=224), [TB pp. 77–79](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=80))  L5 ([TE pp. 216–223](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=230), [TB pp. 80–82](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=83))  L6 ([TE pp. 224–229](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=238), [TB pp. 83–84](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=86))  L7 ([TE pp. 230–234](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=244), [TB pp. 85–86](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=88))  L8 ([TE pp. 236–240](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=250), [TB pp. 87–88](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=90))  Key Resources  L1 **Dung Beetle** video; **Adventure in the Desert** video  L3 **Adventure in a Grassland** video: **Agama Lizard** video  L5 **Who Lives Here?** Read-Aloud text  L6 **Peregrine Falcon** video  **EXAMPLE THREE**  **Grade K Module 1**  **Leveled Reader:** **The Friendly Kakapo**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform)  Associated lessons ([TE pp. 242–257](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=256), [TB 99–105](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=102)) |
| **DCI** | **ESS3.A: Natural Resources**   * Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1) | **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ4  L2 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=172), [TB pp. 56–57](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=59))  L3 ([TE pp. 164–171](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=178), [TB p. 58](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=61))  Key Resources  L2 **Life Under a Rock** video  L3 **Damselfly** video  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L1 ([TE pp. 186–193](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=200), [TB pp. 67–70](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=70))  L2 ([TE pp. 194–201](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=208), [TB pp. 71–73](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=74))  L3 ([TE pp. 202–209](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=216), [TB pp. 74–76](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=77))  L4 ([TE pp. 210–215](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=224), [TB pp. 77–79](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=80))  L5 ([TE pp. 216–223](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=230), [TB pp. 80–82](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=83))  L6 ([TE pp. 224–229](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=238), [TB pp. 83–84](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=86))  L7 ([TE pp. 230–234](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=244), [TB pp. 85–86](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=88))  L8 ([TE pp. 236–240](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=250), [TB pp. 87–88](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=90))  Key Resources  L1 **Dung Beetle** video; **Adventure in the Desert** video  L3 **Adventure in a Grassland** video; **Agama Lizard** video  L5 **Who Lives Here?** Read-Aloud text  L6 **Peregrine Falcon** video  **EXAMPLE THREE**  **Grade K Module 1**  **Leveled Reader:** **The Friendly Kakapo**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=005441830b9c689a6dabd&authid=iv1z8q9GJy6D&cid=tsplatform))  Associated lessons ([TE pp. 242–257](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=256), [TB 99–105](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=102)) |
| **CCC** | **Systems and System Models**   * Systems in the natural and designed world have parts that work together. (K-ESS3-1) | **EXAMPLE ONE**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ4  L2 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=172), [TB pp. 56–57](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=59))  L3 ([TE pp. 164–171](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=178), [TB p. 58](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=61))  L4 ([TE pp. 172–178](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=186), [TB pp. 59–64](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=62))  **EXAMPLE TWO**  **Grade K Module 1**  **My Big Nature Adventure**  M1\_DQ5  L1 ([TE pp. 186–193](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=200), [TB pp. 67–70](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=70))  L2 ([TE pp. 194–201](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=208), [TB pp. 71–73](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=74))  L3 ([TE pp. 202–209](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=216), [TB pp. 74–76](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=77))  L4 ([TE pp. 210–215](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=224), [TB pp. 77–79](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=80))  L5 ([TE pp. 216–223](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=230), [TB pp. 80–82](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=83))  L6 ([TE pp. 224–229](https://resource.twigscience.com/book.html?id=0054418309bec0bb49807&authid=NfW2A6KS6Krp&cid=tsplatform&page=238), [TB pp. 83–84](https://resource.twigscience.com/book.html?id=005441830979b73622a55&authid=325AFXY555HE&cid=tsplatform&page=86)) |

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| --- | --- | --- | --- | --- |
| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Asking Questions and Defining Problems**  Asking questions and defining problems in grades K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.   * Ask questions based on observations to find more information about the designed world. (K-ESS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  Key Resources  L3 **Blizzard** visual  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L5 ([TE pp. 138–143](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=152), [TB pp. 55–56](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=58)) | **K-ESS3-2.**  **Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.\*** [Clarification Statement: Emphasis is on local forms of severe weather.] | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=104), [TB pp. 38–39](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=41))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=110), [TB pp. 40–41](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=43))  L6 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=116), [TB pp. 42–44](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=45))  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L3 ([TE pp. 126–131](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=140), [TB pp. 50–52](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=53))  L5 ([TE pp. 138–143](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=152), [TB pp. 55–56](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=58))  Key Resources  L3 **Weather Data** visual  L5 **Meteorologists** video  **EXAMPLE THREE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L1 ([TE pp. 154–159](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=168), [TB pp. 61–70](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=64))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  Key Resources  L1 **Minneapolis Weather Forecast** visual  L3 **Blizzard** visual  **EXAMPLE FOUR**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform))  Associated lessons ([TE pp. 180–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=194)) |
| **SEP** | **Obtaining, Evaluating, and Communicating Information**  Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.   * Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. (K-ESS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L2 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=92), [TB p. 33](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=36))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=98), [TB pp. 34–37](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=37))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=104), [TB pp. 38–39](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=41))  L5 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=110), [TB pp. 40–41](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=43))  L6 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=116), [TB pp. 42–44](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=45))  Key Resources  L2 **Kinds of Weather** Read-Aloud text  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31))  Key Resources  L10 **Under My Umbrella**  Read-Aloud text  **EXAMPLE THREE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L4 ([TE pp. 132–137](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=146), [TB pp. 53–54](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=56))  **EXAMPLE FOUR**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L1 ([TE pp. 154–159](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=168), [TB pp. 61–70](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=64))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  Key Resources  L3 **Predicting and Preparing for the Weather** Read-Aloud text |
| **DCI** | **ESS3.B: Natural Hazards**   * Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. (K-ESS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  Key Resources  L2 **Severe Weather** video; **Severe Weather Symbols** visual  L3 **Predicting and Preparing for the Weather** Read-Aloud text  **EXAMPLE TWO**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform))  Associated lessons ([TE pp. 180–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=194)) |
| **DCI** | **ETS1.A: Defining and Delimiting an Engineering Problem**   * Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  Key Resources  L1 **Weather** visual; **Be Prepared** video; **Weather Song** video  L4 **Where Does Rain Come From?** video |
| **CCC** | **Cause and Effect**   * Events have causes that generate observable patterns. (K-ESS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L1 ([TE pp. 154–159](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=168), [TB pp. 61–70](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=64))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  **EXAMPLE THREE**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  Chapter 3 ([LR pp. 20–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform&page=24))  Associated lesson ([TE pp. 192–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=206)) |
| **CCC** | ***Connections to Engineering, Technology, and Applications of Science***  **Interdependence of Science, Engineering, and Technology**   * People encounter questions about the natural world every day. (K-ESS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  Key Resources  L1 **Umbrellas** handout; **Weather** visual; **Be Prepared Trailer** video; **Weather Song** video  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  L2 **Severe Weather** video; **Severe Weather Symbols** visual  L3 **Predicting and Preparing for the Weather** Read-Aloud text |
| **CCC** | ***Connections to Engineering, Technology, and Applications of Science***  **Influence of Engineering, Technology, and Science on Society and the Natural World**   * People depend on various technologies in their lives; human life would be very different without technology. (K-ESS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  Key Resources  L1 **Umbrellas** handout; **Weather** visual; **Be Prepared Trailer** video; **Weather Song** video  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  Key Resources  L2 **Severe Weather** video; **Severe Weather Symbols** visual  L3 **Predicting and Preparing for the Weather** Read-Aloud text |

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Obtaining, Evaluating, and Communicating Information**  Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.   * Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L3 ([TE pp. 126–132](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=140), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=57))  L6 ([TE pp. 146–150](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=160), [TB pp. 59–60](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=62))  L3 **Deforestation** visual; **Disappearing Forests** video  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ4  L1 ([TE pp. 156–161](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=170), [TB p. 63](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=66))  L2 ([TE pp. 162–167](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=176), [TB pp. 64–66](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=67))  L3 ([TE pp. 168–173](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=182), [TB pp. 67–68](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=70))  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  Key Resources  L2 **Recycled Object** visual; **Reduce, Reuse, Recycle** video; **Reduce, Reuse, Recycle Snap**  game  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82))  L4 ([TE pp. 198–202](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=212), [TB p. 80](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=83)) | **K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.\*** [Clarification Statement: Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.] | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L5 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=154), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=60))  Key Resources  L5 **Irrigation** video  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ4  L1 ([TE pp. 156–161](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=170), [TB p. 63](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=66))  L2 ([TE pp. 162–167](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=176), [TB pp. 64–66](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=67))  L3 ([TE pp. 168–173](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=182), [TB pp. 67–68](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=70))  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  Key Resources  L2 **Recycled Object** visual; **Reduce, Reuse, Recycle** video; **Reduce, Reuse, Recycle Snap**  game  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82))  L4 ([TE pp. 198–202](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=212), [TB p. 80](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=83)) |
| **DCI** | **ESS3.C: Human Impacts on Earth Systems**   * Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L2 ([TE pp. 120–125](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=134), [TB pp. 51–53](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=54))  L3 ([TE pp. 126–132](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=140), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=57))  L4 ([TE pp. 134–139](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=148), [TB p. 56](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=59))  L5 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=154), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=60))  L6 ([TE pp. 146–150](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=160), [TB pp. 59–60](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=62))  Key Resources  L5 **Irrigation** video  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ4  L1 ([TE pp. 156–161](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=170), [TB p. 63](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=66))  L2 ([TE pp. 162–167](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=176), [TB pp. 64–66](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=67))  L3 ([TE pp. 168–173](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=182), [TB pp. 67–68](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=70))  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  Key Resources  L2 **Recycled Object** visual; **Reduce, Reuse, Recycle** video; **Reduce, Reuse, Recycle Snap** game  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82))  L4 ([TE pp. 198–202](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=212), [TB p. 80](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=83)) |
|  | **ETS1.B: Developing Possible Solutions**   * Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. (secondary to K-ESS3-3) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ3  L5 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=154), [TB pp. 57–58](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=60))  Key Resources  L5 **Irrigation** video  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ4  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82))  L4 ([TE pp. 198–202](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=212), [TB p. 80](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=83))  **EXAMPLE FOUR**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  Chapter 2 ([LR pp.14–21](https://resource.twigscience.com/book.html?id=005441830e0c207f329a0&authid=gAxUg22tD8zz&cid=tsplatform&page=16))  Associated lesson ([TE pp. 210–215](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=224), [TB pp. 83–85](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=86))  Chapter 3 ([LR pp. 22–29](https://resource.twigscience.com/book.html?id=005441830e0c207f329a0&authid=gAxUg22tD8zz&cid=tsplatform&page=24))  Associated lesson ([TE pp. 216–221](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=230), [TB pp. 86–87](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=89)) |
| **CCC** | **Cause and Effect**   * Events have causes that generate observable patterns. (K-ESS3-3) | **EXAMPLE ONE**  **Grade K Module 4**  **I Can**  M4\_DQ4  L2 ([TE pp. 162–167](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=176), [TB pp. 64–66](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=67))  L3 ([TE pp. 168–173](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=182), [TB pp. 67–68](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=70))  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  **EXAMPLE TWO**  **Grade K Module 4**  **I Can**  M4\_DQ1  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=46), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=16))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=52), [TB p. 15](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=18))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=58), [TB pp. 16–17](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=19))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=76), [TB pp. 27–28](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=30))  Key Resources  L5 **A Day in the Life of an**  **Earthworm** video  L7 **Beaver—Jigsaw Puzzle** video; **It’s a Beaver!** video  L10 **Animals Can Change their Environment** video  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ2  L2 ([TE pp. 78–83](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=92), [TB pp. 32–34](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=35))  **EXAMPLE FOUR**  **Grade K Module 4**  **I Can**  M4\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=128), [TB pp. 49–50](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=52))  L6 ([TE pp. 146–150](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=160), [TB pp. 59–60](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=62)) |

**K-PS2 Motion and Stability: Forces and Interactions**

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Planning and Carrying Out Investigations**  Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.   * With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=22), [TB pp. 3–4](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=6))  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=28), [TB pp. 5–6](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=8))  L3 ([TE pp. 20–27](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=34), [TB pp. 7–10](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=10))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L5 ([TE pp. 36–41](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=50), [TB pp. 12–14](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=15))  L8 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=70), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=24))  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ2  L1 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=98), [TB pp. 33–34](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=36))  L2 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=104), [TB p. 35](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=38))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L5 ([TE pp. 108–114](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=122), [TB pp. 39–42](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L6 ([TE pp. 116–121](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=130), [TB pp. 43–45](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=46))  **EXAMPLE FOUR**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56)) | **K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.**  [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.] [*Assessment Boundary: Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.*] | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ1  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=28), [TB pp. 5–6](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=8))  L3 ([TE pp. 20–27](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=34), [TB pp. 7–10](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=10))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L5 ([TE pp. 36–41](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=50), [TB pp. 12–14](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=15))  L6 ([TE pp. 42–47](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=56), [TB pp. 15–17](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=18))  Key Resources  L2 **Let’s Move!** Prior-Knowledge  Read-Aloud text  L3 **The Push and Pull Song** video; **What Makes Things Move?** video  L4 **Exploring Forces** video  L6 **Pushes and Pulls—Odd One Out** video  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ2  L1 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=98), [TB pp. 33–34](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=36))  L2 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=104), [TB p. 35](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=38))  L3 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=110), [TB p. 36](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=39))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L5 ([TE pp. 108–114](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=122), [TB pp. 39–42](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L6 ([TE pp. 116–121](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=130), [TB pp. 43–45](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=46))  Key Resources  L2 **Engineering: Jetpack** video; **Follow the Marble** game  L4 **Speed** video  **EXAMPLE THREE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  Key Resources  L5 **The Challenge** visual; **Engineer Design Steps** visual |
| **SEP** | ***Connections to the Nature of Science***  **Scientific Investigations Use a Variety of Methods**   * Scientists use different ways to study the world. (K-PS2-1) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ2  L1 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=98), [TB pp. 33–34](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=36))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  Key Resources  L4 **Speed** video |
| **DCI** | **PS2.A: Forces and Motion**   * Pushes and pulls can have different strengths and directions. (K-PS2-1) * Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-1) | **EXAMPLE ONE**  (for bullet point 1)  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ1  L3 ([TE pp. 20–27](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=34), [TB pp. 7–10](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=10))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L5 ([TE pp. 36–41](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=50), [TB pp. 12–14](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=15))  L6 ([TE pp. 42–47](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=56), [TB pp. 15–17](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=18))  L7 ([TE pp. 48–55](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=62), [TB pp. 18–20](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=21))  L8 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=70), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=24))  L9 ([TE pp. 62–69](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=76), [TB pp. 23–28](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=26))  L10 ([TE pp. 70–75](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=84), [TB pp. 29–30](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=32))  Key Resources  L2 **Let’s Move!** Prior-Knowledge  Read-Aloud text  L3 **The Push and Pull Song** video; **What Makes Things Move?** video  L4 **Exploring Forces** video  L6 **Pushes and Pulls—Odd One Out** video  **EXAMPLE TWO**  (for bullet point 1)  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ2  L2 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=104), [TB p. 35](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=38))  L3 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=110), [TB p. 36](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=39))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L5 ([TE pp. 108–114](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=122), [TB pp. 39–42](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L6 ([TE pp. 116–121](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=130), [TB pp. 43–45](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=46))  L7 ([TE pp. 122–126](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=136), [TB p. 46](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=49))  **EXAMPLE THREE**  (for bullet point 1)  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  **EXAMPLE FOUR**  (for bullet point 2)  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ1  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=28), [TB pp. 5–6](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=8))  L3 ([TE pp. 20–27](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=34), [TB pp. 7–10](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=10))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L5 ([TE pp. 36–41](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=50), [TB pp. 12–14](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=15))  L6 ([TE pp. 42–47](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=56), [TB pp. 15–17](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=18))  L7 ([TE pp. 48–55](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=62), [TB pp. 18–20](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=21))  L8 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=70), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=24))  L9 ([TE pp. 62–69](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=76), [TB pp. 23–28](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=26))  L10 ([TE pp. 70–75](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=84), [TB pp. 29–30](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=32))  **EXAMPLE FIVE**  (for bullet point 2)  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  **EXAMPLE SIX**  **Grade K Module 2**  **Leveled Reader: Pushes and Pulls**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=0054418308e43df08271b&authid=mQNBhAimPNMd&cid=tsplatform))  Associated lessons ([TE pp. 170–185](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=184), [TB pp. 67–72](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=70)) |
| **DCI** | **PS2.B: Types of Interactions**   * When objects touch or collide, they push on one another and can change motion. (K-PS2-1) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ2  L5 ([TE pp. 108–114](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=122), [TB pp. 39–42](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L6 ([TE pp. 116–121](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=130), [TB pp. 43–45](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=46))  L7 ([TE pp. 122–126](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=136), [TB p. 46](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=49))  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66)) |
| **DCI** | **PS3.C: Relationship Between Energy and Forces**   * A bigger push or pull makes things speed up or slow down more quickly. (secondary to K-PS2-1) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ1  L3 ([TE pp. 20–27](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=34), [TB pp. 7–10](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=10))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L8 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=70), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=24))  L9 ([TE pp. 62–69](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=76), [TB pp. 23–28](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=26))  L10 ([TE pp. 70–75](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=84), [TB pp. 29–30](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=32))  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ2  L2 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=104), [TB p. 35](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=38))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L7 ([TE pp. 122–126](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=136), [TB p. 46](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=49))  **EXAMPLE THREE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  **EXAMPLE FOUR**  **Grade K Module 2**  **Leveled Reader:** **Pushes and Pulls**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=0054418308e43df08271b&authid=mQNBhAimPNMd&cid=tsplatform))  Associated lessons ([TE pp. 170–185](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=184), [TB pp. 67–72](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=70)) |
| **CCC** | **Cause and Effect**   * Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ1  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=28), [TB pp. 5–6](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=8))  L3 ([TE pp. 20–27](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=34), [TB pp. 7–10](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=10))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L5 ([TE pp. 36–41](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=50), [TB pp. 12–14](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=15))  L6 ([TE pp. 42–47](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=56), [TB pp. 15–17](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=18))  L7 ([TE pp. 48–55](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=62), [TB pp. 18–20](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=21))  L8 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=70), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=24))  L9 ([TE pp. 62–69](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=76), [TB pp. 23–28](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=26))  L10 ([TE pp. 70–75](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=84), [TB pp. 29–30](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=32))  Key Resources  L2 **Let’s Move!** Prior-Knowledge  Read-Aloud text  L3 **The Push and Pull Song** video; **What Makes Things Move?** video  L4 **Exploring Forces** video  L6 **Change Direction** visual; **Pushes and Pulls—Odd One Out** video  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ2  L2 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=104), [TB p. 35](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=38))  L3 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=110), [TB p. 36](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=39))  L5 ([TE pp. 108–114](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=122), [TB pp. 39–42](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L6 ([TE pp. 116–121](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=130), [TB pp. 43–45](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=46))  L7 ([TE pp. 122–126](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=136), [TB p. 46](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=49))  Key Resources  L2 **Engineering: Jetpack** video; **Follow the Marble** game  **EXAMPLE THREE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L1 ([TE pp. 132–139](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=146), [TB pp. 49–52](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=52))  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L3 ([TE pp. 146–151](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=160), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=57))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  L6 ([TE pp. 164–168](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=178), TB N/A)  Key Resources  L5 **The Challenge** visual; **Engineer Design Steps** visual  **EXAMPLE FOUR**  **Grade K Module 2**  **Leveled Reader:** **Pushes and Pulls**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=0054418308e43df08271b&authid=mQNBhAimPNMd&cid=tsplatform))  Associated lessons ([TE pp. 170–185](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=184), [TB pp. 67–72](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=70)) |

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| --- | --- | --- | --- | --- |
| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Analyzing and Interpreting Data**  Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.   * Analyze data from tests of an object or tool to determine if it works as intended. (K-PS2-2) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ1  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=28), [TB pp. 5–6](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=8))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L6 ([TE pp. 42–47](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=56), [TB pp. 15–17](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=18))  L8 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=70), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=24))  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ2  L2 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=104), [TB p. 35](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=38))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  **EXAMPLE THREE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L1 ([TE pp. 132–139](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=146), [TB pp. 49–52](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=52))  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L3 ([TE pp. 146–151](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=160), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=57))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66)) | **K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.\*** [Clarification Statement: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.] [*Assessment Boundary: Assessment does not include friction as a mechanism for change in speed.*] | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ2  L3 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=110), [TB p. 36](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=39))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L3 ([TE pp. 146–151](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=160), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=57))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  L6 ([TE pp. 164–168](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=178), TB N/A)  **EXAMPLE THREE**  **Grade K Module 2**  **Leveled Reader: Pushes and Pulls**  Chapter 3 ([LR pp. 20–29](https://resource.twigscience.com/book.html?id=0054418308e43df08271b&authid=mQNBhAimPNMd&cid=tsplatform&page=22))  Associated lesson ([TE pp. 181–185](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=195), [TB pp. 70–72](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=73)) |
| **DCI** | **PS2.A: Forces and Motion**   * Pushes and pulls can have different strengths and directions. (K-PS2-2) * Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-2) | **EXAMPLE ONE**  (for bullet points 1 and 2)  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ1  L3 ([TE pp. 20–27](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=34), [TB pp. 7–10](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=10))  L4 ([TE pp. 28–35](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=42), [TB p. 11](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=14))  L5 ([TE pp. 36–41](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=50), [TB pp. 12–14](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=15))  L6 ([TE pp. 42–47](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=56), [TB pp. 15–17](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=18))  L7 ([TE pp. 48–55](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=62), [TB pp. 18–20](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=21))  L8 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=70), [TB pp. 21–22](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=24))  L9 ([TE pp. 62–69](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=76), [TB pp. 23–28](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=26))  L10 ([TE pp. 70–75](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=84), [TB pp. 29–30](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=32))  Key Resources  L3 **The Push and Pull Song** video; **What Makes Things Move?** video  L4 **Exploring Forces** video  L6 **Change Direction** visual; **Pushes and Pulls—Odd One Out** video  **EXAMPLE TWO**  (for bullet points 1 and 2)  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ2  L2 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=104), [TB p. 35](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=38))  L3 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=110), [TB p. 36](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=39))  L4 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=116), [TB p. 37](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L5 ([TE pp. 108–114](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=122), [TB pp. 39–42](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  L6 ([TE pp. 116–121](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=130), [TB pp. 43–45](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=46))  L7 ([TE pp. 122–126](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=136), [TB p. 46](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=49))  Key Resources  L1 **Score 10 Tool** visual  L2 **Engineering: Jetpack** video; **Follow the Marble** game  L4 **Speed** video  **EXAMPLE THREE**  (for bullet points 1 and 2)  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  **EXAMPLE FOUR**  **Grade K Module 2**  **Leveled Reader: Pushes and Pulls**  All chapters ([LR pp. 2–29](https://resource.twigscience.com/book.html?id=0054418308e43df08271b&authid=mQNBhAimPNMd&cid=tsplatform))  Associated lessons ([TE pp. 170–185](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=184), [TB pp. 67–72](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=70)) |
| **DCI** | **ETS1.A: Defining Engineering Problems**   * A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (secondary to K-PS2-2) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=22), [TB pp. 3–4](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=6))  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L1 ([TE pp. 132–139](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=146), [TB pp. 49–52](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=52))  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L3 ([TE pp. 146–151](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=160), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=57))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  L6 ([TE pp. 164–168](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=178), TB N/A)  Key Resources  L1 **Make Your Marble Move** video |
| **CCC** | **Cause and Effect**   * Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-2) | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ2  L3 ([TE pp. 96–101](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=110), [TB p. 36](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=39))  L5 ([TE pp. 108–114](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=122), [TB pp. 39–42](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=42))  **EXAMPLE TWO**  **Grade K Module 2**  **Marble Run Engineer** M2\_DQ3  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L3 ([TE pp. 146–151](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=160), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=57))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  L6 ([TE pp. 164–168](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=178), TB N/A) |

**K-PS3 Energy**

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Planning and Carrying Out Investigations**  Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.   * Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  Key Resources  L4 **Thermometer** handout; **Hot or Cold** visual; **Where Does Rain Come From?** video | **K-PS3-1.**  **Make observations to determine the effect of sunlight on Earth’s surface.** [Clarification Statement: Examples of Earth’s surface could include sand, soil, rocks, and water.] [*Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/cooler*.] | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31))  Key Resources  L4 **Thermometer** handout; **Hot or Cold** visual; **Where Does Rain Come From?** video  L8 **Sun’s Rays** video  L10 **Under My Umbrella**  Read-Aloud text |
| **SEP** | ***Connections to Nature of Science***  **Scientific Investigations Use a Variety of Methods**   * Scientists use different ways to study the world. (K-PS3-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  Key Resources  L3 **Predicting and Preparing for the Weather** Read-Aloud text |
| **DCI** | **PS3.B: Conservation of Energy and Energy Transfer**   * Sunlight warms Earth’s surface. (K-PS3-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31))  Key Resources  L4 **Thermometer** handout; **Hot or Cold** visual; **Where Does Rain Come From?** video  L8 **Sun’s Rays** video  L10 **Under My Umbrella**  Read-Aloud text |
| **CCC** | **Cause and Effect**   * Events have causes that generate observable patterns. (K-PS3-1) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27)) |

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Constructing Explanations and Designing Solutions**  Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.   * Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  Key Resources  L3 **Umbrella Top Template** handout  L4 **Thermometer** handout; **Hot or Cold** visual; **Where Does Rain Come From?** video  L8 **Sun’s Rays** video | **K-PS3-2.**  **Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.\*** [*Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.*] | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  Key Resources  L3 **Umbrella Top Template** handout  L8 **Sun’s Rays** video |
| **sDCI** | **PS3.B: Conservation of Energy and Energy Transfer**   * Sunlight warms Earth’s surface. (K-PS3-2 | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31)) |
| **CCC** | **Cause and Effect**   * Events have causes that generate observable patterns. (K-PS3-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27)) |

**K–2 Engineering Design**

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | | **Asking Questions and Defining Problems**  Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions.   * Ask questions based on observations to find more information about the natural and/or designed world(s). (K–2-ETS1-1) * Define a simple problem that can be solved through the development of a new or improved object or tool. (K–2-ETS1-1) | | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ3  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ4  L2 ([TE pp. 160–165](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=174), [TB pp. 71–75](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=74))  L3 ([TE pp. 166–171](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=180), [TB p. 76](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=79))  L4 ([TE pp. 172–177](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=186), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=80))  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ4  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  **EXAMPLE FOUR**  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80)) | **K–2-ETS1-1.**  **Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.** | **EXAMPLE ONE**  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ3  L3 ([TE pp. 146–151](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=160), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=57))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  Key Resources  L5 **The Challenge** visual, **Engineer Design Steps** visual  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31))  Key Resources  L1 **Umbrella/Weather** handout; **Weather** visual; **Be Prepared** video, **Weather Song** video  L4 **Thermometer** handout; **Hot or Cold** visual; **Where Does Rain Come From?** video  **EXAMPLE THREE**  **Grade K Module 4**  **I Can**  M4\_DQ4  L4 ([TE pp. 174–178](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=188), [TB pp. 69–70](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=72))  **EXAMPLE FOUR**  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82)) |
| **DCI** | | **ETS1.A: Defining and Delimiting Engineering Problems**   * A situation that people want to change or create can be approached as a problem to be solved through engineering. (K–2-ETS1-1) * Asking questions, making observations, and gathering information are helpful in thinking about problems. (K–2-ETS1-1) * Before beginning to design a solution, it is important to clearly understand the problem. (K–2-ETS1-1) | | **EXAMPLE ONE**  (for bullet point 1)  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=22), [TB pp. 3–4](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=6))  **EXAMPLE TWO**  (for bullet point 1)  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  **EXAMPLE THREE**  (for bullet point 1)  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82))  **EXAMPLE FOUR**  (for bullet point 2)  **Grade K Module 2**  **Marble Run Engineer**  M2\_DQ3  L1 ([TE pp. 132–139](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=146), [TB pp. 49–52](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=52))  L2 ([TE pp. 140–145](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=154), [TB p. 53](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=56))  L3 ([TE pp. 146–151](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=160), [TB pp. 54–55](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=57))  L5 ([TE pp. 158–163](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=172), [TB pp. 63–66](https://resource.twigscience.com/book.html?id=00544183078247b86783f&authid=8ocH8Nn0x57E&cid=tsplatform&page=66))  L6 ([TE pp. 164–168](https://resource.twigscience.com/book.html?id=005441830c11fb29e1edb&authid=I0bgqNh5IPhW&cid=tsplatform&page=178), TB N/A)  **EXAMPLE FIVE**  (for bullet point 2)  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L4 ([TE pp. 26–31](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=40), [TB p. 17](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=20))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  **EXAMPLE SIX**  (for bullet point 2)  **Grade K Module 4**  **I Can**  M4\_DQ5  L1 ([TE pp. 184–189](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=198), [TB pp. 73–76](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=76))  L2 ([TE pp. 190–193](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=204), [TB pp. 77–78](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=80))  L3 ([TE pp. 194–197](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=208), [TB p. 79](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=82))  **EXAMPLE SEVEN**  (for bullet point 3)  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  **EXAMPLE EIGHT**  **Grade K Module 4**  **Leveled Reader: Animal Builders**  Chapter 2 ([LR pp.14–21](https://resource.twigscience.com/book.html?id=005441830e0c207f329a0&authid=gAxUg22tD8zz&cid=tsplatform&page=16))  Associated lesson ([TE pp. 210–215](https://resource.twigscience.com/book.html?id=00544183056d20da5dc67&authid=tdkj68c2uUHB&cid=tsplatform&page=224), [TB pp. 83–85](https://resource.twigscience.com/book.html?id=005441830d7f2f2e82ddb&authid=GbhzYV81eHgo&cid=tsplatform&page=86)) |
| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | | | **Developing and Using Models**  Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.   * Develop a simple model based on evidence to represent a proposed object or tool. (K–2-ETS1-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ2  L1 ([TE pp. 72–77](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=86), [TB pp. 31–32](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=34))  L3 ([TE pp. 84–89](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=98), [TB pp. 34–37](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=37))  L4 ([TE pp. 90–95](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=104), [TB pp. 38–39](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=41))  L6 ([TE pp. 102–107](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=116), [TB pp. 42–44](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=45))  Key Resources  L1 **What Is the Weather Like?** video  L3 **More Weather Symbols** handout  L4 **Nine Weather Symbols** handout    **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  Key Resources  L3 **Umbrella Top Template** handout | **K–2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.** | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31))  Key Resources  L3 **Umbrella Top Template** handout  **EXAMPLE TWO**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  Chapter 2 ([LR pp.10–19](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform&page=16))  Associated lesson ([TE pp. 186–191](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=200)) |
| **DCI** | | | **ETS1.B: Developing Possible Solutions**   * Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. (K–2-ETS1-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31))  **EXAMPLE TWO**  **Grade K Module 3**  **Leveled Reader: What’s the Weather?**  Chapter 2 ([LR pp.10–19](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform&page=16))  Associated lesson ([TE pp. 186–191](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=200))  Chapter 3 ([LR pp. 20–29](https://resource.twigscience.com/book.html?id=005441830d0e7a6e27e8a&authid=pMMYh9fZUnzR&cid=tsplatform&page=24))  Associated lesson ([TE pp. 192–197](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=206)) |
| **CCC** | | | **Structure and Function**   * The shape and stability of structures of natural and designed objects are related to their function(s). (K–2-ETS1-2) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31)) |

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| **Science and Engineering Practices**  **Disciplinary Core Ideas**  **Crosscutting Concepts** | | **Publisher Citations** | **Performance Expectation** | **Publisher Citations** |
|
| **SEP** | **Analyzing and Interpreting Data**  Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.   * Analyze data from tests of an object or tool to determine if it works as intended. (K–2-ETS1-3) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L2 ([TE pp. 14–19](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=28), [TB pp. 13–14](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=16))  L5 ([TE pp. 32–37](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=46), [TB pp. 18–19](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=21))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30))  **EXAMPLE TWO**  **Grade K Module 3**  **Be Prepared**  M3\_DQ3  L1 ([TE pp. 114–119](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=128), [TB pp. 47–48](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=50))  L2 ([TE pp. 120–124](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=134), [TB p. 49](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=52))  L3 ([TE pp. 126–131](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=140), [TB pp. 50–52](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=53)) | **K–2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.** | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30))  L10 ([TE pp. 62–66](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=76), [TB p. 28](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=31)) |
| **DCI** | **ETS1.C: Optimizing the Design Solution**   * Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K–2-ETS1-3) | **EXAMPLE ONE**  **Grade K Module 3**  **Be Prepared**  M3\_DQ1  L1 ([TE pp. 8–13](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=22), [TB pp. 7–12](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=10))  L3 ([TE pp. 20–25](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=34), [TB pp. 15–16](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=18))  L6 ([TE pp. 38–43](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=52), [TB p. 20](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=23))  L7 ([TE pp. 44–49](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=58), [TB pp. 21–23](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=24))  L8 ([TE pp. 50–55](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=64), [TB pp. 24–26](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=27))  L9 ([TE pp. 56–61](https://resource.twigscience.com/book.html?id=005441830db2d82ac2d79&authid=vaJUS42NFyHz&cid=tsplatform&page=70), [TB p. 27](https://resource.twigscience.com/book.html?id=00544183032913b9053b9&authid=lmxahhGhIuBI&cid=tsplatform&page=30)) |