Code Cube™

Learning Outcomes

PITSCO EDUCATION

LESSON 1

TURNING ON THE LIGHTS

In Lesson 1, students learn how to make the Code Cube™ display an image that they create.

Activity Connections

- ELA – Orient the reader by establishing a situation and introducing a narrator and/or characters.
- SEL – Through self-awareness, identify emotions.
- Math – Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts.
- Science – Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

LESSON 2

CHANGING LIGHTS

In Lesson 2, students learn how to make the Code Cube display multiple images that they create.

Activity Connections

- ELA – Orient the reader by establishing a situation and introducing a narrator and/or characters.
- SEL – Through self-awareness, identify emotions.
- Math – Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts.
- Science – Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

LESSON 3

TURN THAT FROWN UPSIDE DOWN

In Lesson 3, students learn how to make the Code Cube display different images based on the position it's facing.

Activity Connections

- ELA – Use precise language and domain-specific vocabulary to inform about or explain the topic.
- SEL – Through relationship skills, practice communication.
- Math – Identify line-symmetric figures and draw lines of symmetry.
- Science – Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

LESSON 4

ROCK, PAPER, SCISSORS

In Lesson 4, students learn how to make the Code Cube display different images based on the position it's tilted.

Activity Connections

- ELA – Provide a concluding statement or section related to the information or explanation presented.
- SEL – Through relationship skills, practice relationship building.
- Math – Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.
- Science – Analyze and interpret data from maps to describe patterns of Earth's features.

LESSON 5

SOUND OFF

In Lesson 5, students learn how to make the Code Cube display different images with sounds.

Activity Connections

- ELA – Use a variety of transitional words and phrases to manage the sequence of events.
- SEL – Through social awareness, practice perspective taking.
- Math – Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Science – Support an argument that the gravitational force exerted by Earth on objects is directed down.

LESSON 6

THE SERVER'S TRAY

In Lesson 6, students learn how to make the Code Cube play sounds for different scenarios or situations.

Activity Connections

- ELA – Provide a concluding statement or section related to the information or explanation presented.
- SEL – Through social awareness, practice appreciating diversity.
- Math – Solve problems involving measurement and estimation.
- Science – Generate and compare multiple solutions that use patterns to transfer information.

LESSON 7

RIDDLED

In Lesson 7, students learn how to make the Code Cube become a prompting device for riddles.

Activity Connections

- ELA – Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
- SEL – Through relationship skills, practice social engagement.
- Math – Students create math-centric riddles.
- Science – Students use observational skills to represent the world around them.

LESSON 8

SLIDE DANCE

In Lesson 8, students learn how to make the Code Cube help people to get moving.

Activity Connections

- ELA – Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
- SEL – Through relationship skills, practice teamwork.
- Math – Solve problems involving measurement and estimation.
- Science – Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

LESSON 9

ANIMATED DISPLAYS

In Lesson 9, students learn how to make the Code Cube move objects on-screen.

Activity Connections

- ELA – Orient the reader by establishing a situation and introducing a narrator and/or characters. Organize an event sequence that unfolds naturally.
- SEL – Through responsible decision-making, practice solving problems.
- Math – Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- Science – Support an argument that the gravitational force exerted by Earth on objects is directed down.

LESSON 10

A LITTLE EXTRA!

In Lesson 10, students learn how to make the Code Cube display a pattern that they create.

Activity Connections

- ELA – Orient the reader by establishing a situation and introducing a narrator and/or characters. Organize an event sequence that unfolds naturally.
- SEL – Through social awareness, practice empathy.
- Math – Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- Science – Support an argument that the apparent brightness of the Sun and stars is due to their relative distances from Earth.

All activities are designated by a connection to English language arts (ELA), social-emotional learning (SEL), mathematics, and science concepts. The correlations provided in the teacher's guide are for the intended connections and not overtly taught or assessed. Use your discretion when assessing the activities for what works best in your classroom.

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