

DIGITAL LESSON

LIGHTNING
LESSON

NEWTON'S LAWS OF MOTION



The screenshot shows a digital lesson interface. At the top left, there is a red square with a white 'X' icon. Below it is a speaker icon. The main title is 'NEWTON'S LAWS OF MOTION' in large, bold, red letters with a white outline. To the right of the title is an illustration of an apple tree with many red apples. Below the title, there are five icons representing different activities: 'KEY VOCABULARY' (a red apple with a green checkmark), 'MEET NEWTON' (a portrait of Newton with a green checkmark), 'ARTICLES ON LAWS OF MOTION' (a book with a green checkmark), 'LAWS OF MOTION SORT' (a purple apple with a green checkmark), and 'QUIZ' (a red apple with question marks). At the bottom of the interface, there is a search bar with a magnifying glass icon and a row of seven blue square buttons.

DIGITAL LESSON

NEWTON'S LAWS OF MOTION

KEY VOCABULARY

MEET NEWTON

ARTICLES ON LAWS OF MOTION

LAWS OF MOTION SORT

QUIZ

WHAT ARE LIGHTNING LESSONS?

Short, engaging, fully digital lessons that:

- Introduce and Build Tier 3 Academic Vocabulary
- Introduce Key concepts with engaging videos or digital lessons
- Include a Practice Activity
- Include a short quiz or assessment

DIGITAL LESSON



NEWTON'S LAWS OF MOTION



KEY VOCABULARY



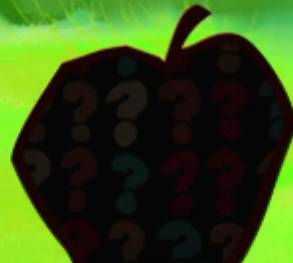
MEET NEWTON



ARTICLES ON
LAWS OF MOTION



LAWS OF
MOTION SORT



QUIZ



EASY TO NAVIGATE HUB

Perfect for whole class
instruction on a smart board
or projector.

★ or ★

Independent student work,
center, or intervention



Click on each of the card below to find out what the vocabulary words mean!



Push



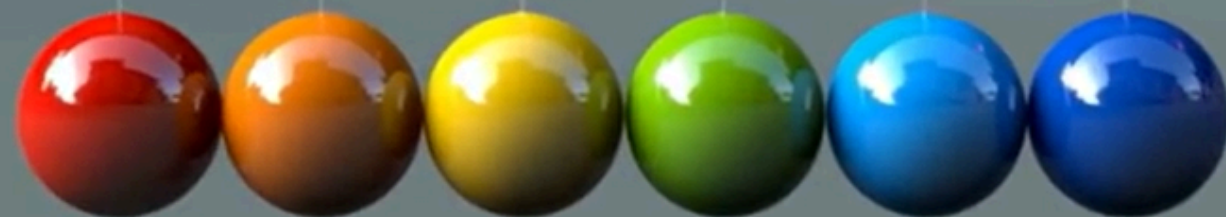
Pull is when force moves an object closer to something.

Mass

INTERACTIVE VOCABULARY CARDS

- Introduce Tier 3, Academic Vocabulary
- Audio
- Interactivity

DISCOVERING MOTION



Video Mini Lesson



ORIGINAL VIDEO LESSON BY MAGICORE ACADEMY

Introduces concept and key
vocabulary

First Law: Inertia

Book on a table: A book remains resting on a table until you pick it up or knock it off.

Bicycle: If you're riding a bike and stop pedaling, the bike will eventually slow down and stop because of friction from the ground and air.

Kicking a soccer ball: A soccer ball will sit still on the ground until you kick it.

Second Law: Force and Acceleration

Pulling a wagon: If you pull an empty wagon, it moves faster than if it's full of heavy toys because there's less weight (mass).

Throwing a ball: A baseball travels farther when thrown hard, compared to when thrown softly because of the greater force.

Third Law: Action and Reaction

Rocket launch: A rocket blasting off pushes gas downward, which makes the rocket itself move upward.

Jumping off a boat: When you jump off a boat onto the dock, the boat moves backward in the water because you're pushing against it.

Paddling a canoe: When you paddle backward with an oar, the water pushes the canoe forward.

Kicking a basketball versus a soccer ball: A basketball doesn't go as far as a soccer ball when kicked with the same force because the basketball is heavier (more mass).



Sort these scenarios by dragging and dropping the scenario under the law of motion it matches!



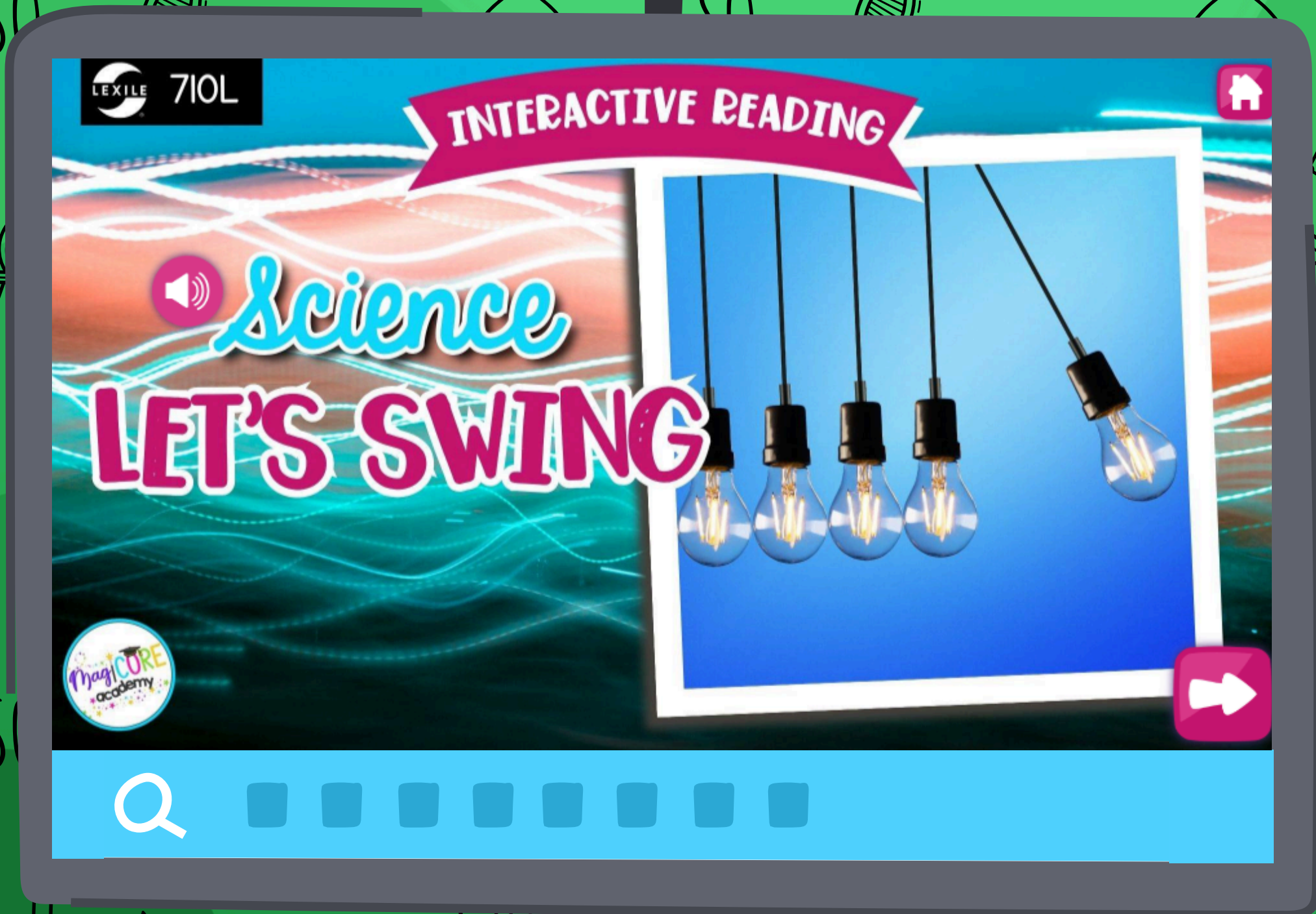
INTERACTIVE ACTIVITY

Short activity to practice concepts learned in video lesson



SELF ASSESS

Immediate student or class feedback on activities and multiple choice questions.



INTERACTIVE READER

- Standards Based
- Lexile Leveled
- Nonfiction
- Application of Science Skill
- Interactive
- Quiz based on reader

Question 5

What kind of energy do your legs have when you are squatting, ready to jump?

- Kinetic energy
- Potential energy
- Chemical energy
- Kinetic and potential energy

SUBMIT

The interface also includes a home icon, a play button, a search icon, and a progress indicator with seven blue squares.

QUIZ

- Multiple choice and short response questions
- Encourages students to refer back to the video
- Multiple choice questions give immediate feedback to students

Balanced & Unbalanced Forces Answer Recording Sheet

Type your name here



- Activity 1a: The car hit the wall.
- Activity 1b: The wall pushes back against the car.
- Activity 2: Answered Correctly
- Activity 3: Scientists use crash test dummies to study unbalanced forces. They put sensors all over the dummies body to measure the forces they feel. Then, they mimic real car crashes in a lab so they can measure the forces a human would experience.
- Quiz 1: Force is a push or pull on an object.
- Quiz 2: Answered Correctly
- Quiz 3: When a car is moving down the highway.
- Quiz 4: Unbalanced forces happen when the forces are not equal.
- Quiz 5: The foot has more force than the ball and gravity.
- Quiz 6: The ball stops because the forces become balanced.
- Quiz 7: They can help us stay safe like the example with crash test dummies.



TEACHER REVIEW

Student responses are reported at the end of the lesson for students to print or teachers to review.