

Lesson: Falling Objects

Reference to English
Interconnections Lesson
Falling Objects Pg. 62

Science Standard(s): Students will gain an understanding of Physical Science through the study of the forces of motion and the properties of materials.

Objective(s): Communicate observations about falling objects.

Indicator(s): Observe falling objects and identify things that prevent them from reaching the ground.

: Communicate observations that similar objects of varying masses will fall at the same rate.

Content Objective(s):

kid friendly objective. Will be posted on the board.

Language Objective(s):

Kid friendly. Posted on the board. May include listening, speaking, reading, writing. See list of possible verbs.

Essential Questions: What can we learn about non-living things?

Academic Vocabulary:

重力, 掉下, 密度

Materials:

- objects that will fall
- feather
- tissues
- paper clips

Language References and Word Wall:

Required: 重力, 掉下, 密度

Additional:

Sentence Frames:

I think the _____ will fall first because _____.

我想_____会先掉下, 因为_____.

Lesson: Falling Object

Instructional time:
30 minutes

Opening: (3 minutes)

Walk in front of the class and drop a heavy book. The loud thud will get the students attention.

Question:

Why did this happen?

为什么发生?

Does it happen with everything?

每一次都会发生吗?

Drop other objects – pencil, ball, paper clip

Introduction to New Material (Direct Instruction): (1 minutes)

This is **GRAVITY**. Objects fall the same.

Guided Practice: (7 minutes)

Explain to the students that they are going to experiment with gravity. After demonstrations pass out materials.

Use the modeling cycle:

Teacher Does:

(Already done with opening)

Teacher Does with Student:

Bring up a student and have them drop objects.

Two Students Do:

Bring up 2 students and have them each drop a different object to see which on will hit the ground 1st.

All Students Practice:

Partner up the students. Have them compete to see which object lands on the ground 1st.

Continuation of Introduction to New Material: (7 minutes)

Let's try it with a feather.

Objects are still pulled down by the same **GRAVITY**, but it does not fall the same because it catches air.

- Take two tissues.
- Show the students that they are the same.
- Then crumple one up into a ball.
- Drop both at the same time.
- Which one hit the ground 1st?
- Why?
- They fell at the same rate of gravity, but the flat tissue caught the air.
- Take two tissues again.
- Connect two corners of one tissue and make a parachute.
- Ask the students which one will hit the ground 1st? – the one with the paper clip or without?
- Have them turn to a partner and say "I think the _____ will fall first because _____."

Independent Interactive Practice: (6 minutes)

Work with a partner and create an object they think will take the longest to hit the ground. They can only use two things to make their project.

Use the modeling cycle:

Teacher Does with Student:

Have a student come up to be partners with the teacher. Discuss what items they want to choose (can only choose two). Collect the two items and put them together. Come together in front of the class and have a competition between their object and the teachers original example.

Language Suggestions:

What should we choose?

我们因该选什么？

I want _____.

I think _____.

Two Students Do:

Have two students come up and demonstrate the process of the experiment.

All Students Practice:

Work in groups to create something to resist gravity.

Closing: (4 minutes)

Questioning:

What did you notice?

你发现什么？

Which items fell first?

什么东西先掉下来？

Extention:

Watch videos of people walking on the moon. Show that the gravity isn't as strong on the moon.

Watch the feather and hammer drop on the moon. (you can find on youtube.com)

Assessment:

Observation of student conversations and their use of the sentence frame.

Present project.