

Grade 2 Science

Lesson: 4-10
4-12

Unit: Movement

Topic: Friction - Slide

Lesson

- Provide each group with samples of cloth, tin foil + wax paper
 - How does each sample feel?
 - Which is smoothest? Roughest?
- Have students cover the bottom of pennies with materials
 - trace penny, cut out, glue on bottom
- Explain activity to students
 - place penny at end of ~~ice~~ ^{book}
 - raise until penny slides
 - measure height ~~ice~~ ^{book} was raised
- Show a gurch demo
- Hand out work sheet, showing students where to record height
- Students perform experiment

Reminders

Supplies Needed

- | | | |
|--|--------------|------------|
| - Cookie sheets filled with a sheet of ice | - Wax Paper | - Markers |
| - Various types of cloth | - Pennies | - Scissors |
| - Tin foil | - White glue | |

Homework

Notes

*Need to prepare ice prior to class

Ice did not work, use a book

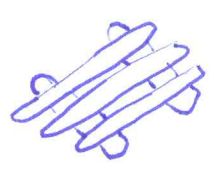
Grade 2 Science

Lesson: 4-13

Unit: Movement

Topic: Friction & Sled

Lesson

- Review experiment
- Have students answer questions on the back of the worksheet from previous class
- Discuss "Friction" → when surfaces rub they ~~start~~ get caught on one another
→ Even though look flat, they are not 
- Explain activity → use information learned last class to build a sled
- Students build and play with sleds
→ Frame with popsicle sticks
→ cover runner w. material 

Reminders

Supplies Needed

- | | | | |
|-------------------|--------------------------|--------------------------|----------------|
| - Worksheets | - Various types of cloth | - white glue | - example sled |
| - Popsicle sticks | - Tin foil | - scissors | |
| | - Wax paper | - cookie sheets with ice | |

Homework

Notes

Grade 2 Science

Lesson: ¹⁴4-18

Unit: Movement

Topic: ^{Tools}~~Simple Machines~~

Lesson

- "when you have difficulty doing something, what can you do to get the job done?" → use a tool (machine)
 - Put a couple of tools on each desk
 - What is the name of the tool?
 - How is it used?
 - When would you use it?
 - How does it work?
 - How does it make work easier?
 - what is work? → the energy needed to do a job.
 - Hand out worksheet and explain
 - students work on worksheet.
- Have students play,
- rotate to each desk,
- then discuss
- Put ideas on board

Reminders

Supplies Needed

- worksheet
- Toolbox with large variety of tools

Homework

Notes

Grade 2 Science

Lesson: 4-¹⁵

Unit: Movement

Topic: Simple Machines

Lesson

- Tell students that ~~today's~~ lesson would go backwards.
 - First they will do a worksheet
 - Then we will talk about the lesson
- Hand out worksheet and explain what to do.
- Give students ~ 15 minutes (max) to finish
- Inform students that they have just learned about the 6 simple machines
- Discuss (taking student input) each of the 6 simple machines
- Show an example of each
- Discuss penny slide activity in regards to inclined plane

Reminders

Supplies Needed

Worksheet

Homework

Notes

Grade 2 Science

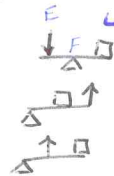
Lesson: 4-16

Unit: Movement

Topic: Levers

Lesson

- "What would you say if I told you that I think any one of you could pick me up?" → Play it up
- Use ruler to show half brick lifting full brick → compare to student lifting me
- ~~Set up 2 sets as a lever and have student lift me (safety)~~
- Discuss the fact that it is a lever (a bar used to help move something)
- Discuss parts of a lever (arm, fulcrum, load, ~~Effect~~)
- There are 3 types of levers
 - teeter totter = class 1
 - wheel barrow = class 2
 - hockey stick = class 3
- Hand out work sheet



Reminders

Supplies Needed

- ~~1-1-1~~
- meter stick
- Marker (Pencils)
- Work sheet
- Bricks

Homework

Notes

Grade 2 Science

Lesson: 4-17

Unit: Movement

Topic: Wedges / Pulleys

Lesson

- Today we will talk about two more "simple machines"
- A wedge is a tool with a slanted surface that ends at a thin edge
- Show example (tool or knife etc)
- Wedges are used to separate or push things apart
- DISCUSS examples (cutting wood, using a knife, prying frozen hamburgers)
- A pulley is a simple machine that uses a rope or cable that goes through a grooved wheel
- Pulleys can make it very easy to lift something
- Example → use string ~~and~~ ^{on} ~~brass~~ to make pulley system and lift something
- Worksheet

Reminders

Supplies Needed

- Worksheet
- broom
- Pulley
- String
- weights

Homework

Notes

Grade 2 Science

Lesson: 4-18

Unit: Movement

Topic: screw / wheel + axle

Lesson

- Explain that an "Inclined Plane" is a simple machine and we have already done some work with inclined planes → penny slide, so we don't need a worksheet
- An inclined plane is any slanted surface → makes it easier to move (ramp)
- "What is a screw?" → take answer
- "What if I told you that was only one type?" → discuss screw = any threaded surface is. jar etc
- Screws need to be turned to work
- The last simple machine is the "wheel and axle"
- Practically reduces friction, making it easier to move things
- Sometimes axle is turned (as in a car), other times the wheels are turned to make axle move → ~~Don't~~ Raising bucket in a well
- ~~No worksheet~~

Reminders

Supplies Needed

- worksheet

Homework

Notes

Grade 2 Science

Lesson: 4-18¹⁹

Unit: Movement

Topic: Simple Machine Booklet

Lesson

- Explain to students that they have now learned about all 6 types of simple machine ~~(review)~~
- Review each one quickly
- Inform students that the work they are doing, starting today, is going to be marked for their report card, so take their time and be sure to answer ~~it~~ carefully.
- Hand-out and explain activity.

Reminders

Supplies Needed

- Simple machine booklets.

Homework

Notes

Grade 2 Science

Lesson: 4-20

Unit: Movement

Topic: Simple Machine Booklet

Lesson

- Students are to continue work on their simple machine booklets
- If finished students should verify that all other previous work is complete, if not finish it
- If all done → read.

Reminders

Supplies Needed

Homework

Notes