

# Grade 3 Science

Lesson: 5-1

Unit: Strong and Stable Structures

Topic: Intro - Strength vs Stability

## **Lesson**

- Inform students that our new (last) unit is called strong and stable structures
- Hand out worksheet and explain → write down all you can  
→ not expected to know, because I have not taught yet
- If students finish early they may start writing unit name on back of paper (for title page)
- After ~15 minutes stop class and discuss "strong" and "stable"
  - ↑  
ability to support a load (resist force)
  - ↑  
ability to maintain balance and stay in one spot
- Students use remaining time to work on title page.

## **Reminders**

## **Supplies Needed**

- Worksheets

## **Homework**

## **Notes**

## Grade 3 Science

Lesson: 5-2

Unit: Strong and Stable Structures

Topic: Structure

### Lesson

- Review the concepts of strength and stability  
(support a load) (stay up in a place)
- Inform class that today we will be looking at structure
- Hand out worksheets and explain task - use picture to answer questions, then turn page over and finish additional questions
- students work
- If done early they are to check answers with others.

### Reminders

### Supplies Needed

- Worksheets
- Pictures

### Homework

### Notes

Define a structure as a supporting framework with a finite size, shape and purpose that holds a load

## Grade 3 Science

Lesson: 5-3

Unit: Strong and Stable Structures

Topic: Scientist in the Classroom

### Lesson

- Hand out permission form well in advance
- Check w scientist for necessary supplies well in advance
- Set up room to what they want

### Reminders

### Supplies Needed

### Homework

### Notes

# Grade 3 Science

Lesson: 5-4

Unit: Strong and Stable Structures

Topic: Select

Lab report

## **Lesson**

- Start class by discussing the activities that were done with the scientist in the classroom
- Ask students "When a scientist does an experiment, what are some things they need to think about?"
  - Why do it, what results are they looking for, safety, how will they record results
- Ask "What must a scientist do when they are done?" - record experiment so others know about it
- "What does a scientist use to record an experiment?" - a lab report
- "What ~~not~~ should be included in a lab report?" - purpose, procedure, ~~observed~~ equipment, observations, discussion.
- Review each section
- Explain task → Choose one of the activities done last class  
→ Write a lab report to document the experiment
- Show students scientific method guiding sheets
- Students start writing lab report
- Hand out blank lab sheets

## **Reminders**

## **Supplies Needed**

- Scientific Method Guiding sheets
- Blank lab sheets

## **Homework**

## **Notes**

Science  
Grade 3 ~~Structures~~

Lesson: 5-5

Unit: Strong and Stable Structures

Topic: Lab Report

**Lesson**

- Students continue working on lab report
- If done, students should find someone to review and help point out any areas that are unclear or could use more detail or are missing something.

**Reminders**

**Supplies Needed**

- Scientific Method guiding sheets.

**Homework**

**Notes**

## Grade 3 Science

Lesson: 5-6

Unit: Strong and Stable Structures

Topic: Lab Report - Finish

### Lesson

- Inform students that today will be their last period to finish their lab report
- If done students are encouraged to add diagrams/detail to diagrams
- Students may also choose to share their lab report with someone else who is done
- Students may complete any other finish-up work.

### Reminders

### Supplies Needed

### Homework

### Notes

# Grade 3 Science

Lesson: 5-7

Unit: Strong and Stable Structures

Topic: Stability

## **Lesson**

- Ask students to stand their pencil on their desk
  - most can not
  - if one succeeds, knock it over with a gentle tap of the desk
- Ask "Why didn't it work?" or "Why was it so hard?"
  - pencil is not stable
- Discuss stability "Ability to maintain balance and stay in one spot"
- Explain today's experiment → let students read procedure
  - Remind them about what a hypothesis is
  - DO NOT DAMAGE TUBES
- Students perform experiment
- Students answer discussion

## **Reminders**

## **Supplies Needed**

- Cardboard tubes (3 heights) → 1 set / 2 or 3 students
- Worksheets

## **Homework**

## **Notes**

- \* Short lesson → Extension - when done, have students do similar experiments
- ① Thick, Med, Thin (cut TP roles, roll tighter, tape).
  - ② 6 Different heights of rolls (or as many as there are - cut TP to short)
  - ③ 3 identical rolls
  - ④ Make up your own i.e., pencils

## Grade 3 Science

Lesson: 5-8

Unit: Strong and Stable Structures

Topic: Increasing Stability

### Lesson

- Review concept learned last class → taller structures are not as stable
- Explain today's task → use supplies to create a more stable structure
  - Make up own experiment, test it, record results
  - Do not damage tubes
- Students get in groups and begin planning \* Plan before getting supplies
- Circulate to be sure students are on track.
- When students are done, they are to see what other groups did.
  - \* Must be free-standing
  - \* Must show improved stability → How will I know it is better?
  - \* All supplies (except tape) must be returned undamaged  
→ cardboard may be cut

### Reminders

### Supplies Needed

- |                   |             |         |
|-------------------|-------------|---------|
| - Worksheets      | - Elastics  | - Tape  |
| - Cardboard Tubes | - Cardboard | - Trays |
| - Tissue Paper    | - Beans     |         |

### Homework

### Notes

## Grade 3 Science

Lesson: 5-9

Unit: Strong and Stable Structures

Topic: Natural vs Man-Made Structures  
+ Famous

### Lesson

- Explain today's tasks
  - Read through front of worksheet, answer both questions
  - Read through back page
  - Use picture page to fill in table
  - Use internet + library books to find info about structures
- Students finish up work from last class
- Students then may take today's sheet.

### Reminders

- Book Library → Books + Computers
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### Supplies Needed

- Worksheets
- Pictures Pages

### Homework

### Notes

# Grade 3 Science

Lesson: 5-10

Unit: Strong and Stable Structures

Topic: Material Properties

## Lesson

- Review: "What is a structure?" → supporting framework with a definite size, shape and purpose, that holds a load  
"What is strength?" → ability to support a load  
"What is stability?" → ability to maintain balance and stay in place
- Ask "What is a material? → something used to make an object.
  - ↳ "Are all materials the same? → No → discuss ... different properties (strength, flexibility, durability)
  - Hand out worksheet and read intro paragraph as a class
  - Explain each task
  - Students work
  - If finished, students do finish up

## Reminders

## Supplies Needed

- Worksheets

## Homework

## Notes