# Grade 3 Science

**Lesson:** 5-1  
**Unit:** Strong and Stable Structures  
**Topic:** Intro - Strong vs. Stability

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| - Inform students that our new unit is called strong and stable structures.  
- Read out worksheet and explain to 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. |

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<tbody>
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<td>- Worksheets</td>
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# 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 on paper)
- Inform class that today we will be looking at structure.
- Hand out worksheets and explain task — use pictures 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 definite size, shape, and purpose that holds a load.
Grade 3 Science

Lesson: 5-3  Unit: Strong and Stable Structures  Topic: Scientist in the Classroom

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

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# Grade 3 Science

**Lesson:** 5-4  
**Unit:** Strong and Stable Structures  
**Topic:** 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 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


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<td>- Students continue working on lab report</td>
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<td>- 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</td>
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| Reminders | |
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<tr>
<td>- Scientific Method guiding sheets</td>
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| Homework | |
|----------| |

| Notes | |
|--------| |
Grade 3 Science

Lesson: 5-6  Unit: Strong and Stable Structures  Topic: Lab Report - Finals

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 final-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/2-3 students
- Worksheets

Homework

Notes

Short Lesson → Extension - when done, have students do similar experiments...
  1. Thick, Med, Thin (cut TP rolls, 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
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 tube
- 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
- Cardboard tubes
- Tissue paper
- Elastics
- Cardboard
- Beans
- Tape
- Trays

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 of busy  
  - Use pictures 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

## Supplies Needed

- Work sheets
- Pictures/ pages

## Homework


## Notes
# Grade 3 Science

| Lesson: 5-10 | Unit: Strong and Stable Structures | Topic: Material Properties |

## Lesson

- **Review:** "What is a structure?" — a 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