# Physical Science Lesson Plan
## Date: February 26, 2021

| **Grade: First** | **Subject: Physical Science** |
|---|---|
| **Materials: Transparent, Translucent, opaque, reflective posters and objects. Transparent, Translucent, opaque, and reflective kits for the students. They will be in groups – so maybe make 8 kits to be sure to have enough. Flashlights for each group. Various objects of transparent, translucent, opaque, and reflective materials.** | **Technology Needed:** |
| **Instructional Strategies:**<br>☐ Direct instruction<br>☐ Guided practice<br>☐ Socratic Seminar<br>☐ Learning Centers<br>☐ Lecture<br>☐ Technology integration<br>☐ Other (list)<br>☐ Peer teaching/collaboration/ cooperative learning<br>☐ Visuals/Graphic organizers<br>☐ PBL<br>☐ Discussion/Debate<br>☐ Modeling | **Guided Practices and Concrete Application:**<br>☐ Large group activity<br>☐ Independent activity<br>☐ Pairing/collaboration<br>☐ Simulations/Scenarios<br>☐ Other (list)<br>Explain:<br>☐ Hands-on<br>☐ Technology integration<br>☐ Imitation/Repeat/Mimic |
| **Standard(s)**<br>Performance Standard 1-PS4-3: Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path a beam of light.<br><br>**Objective(s)**<br>**By the end of the lesson, students will be able to determine transparent, translucent, opaque, and reflective of objects made of different materials by using a beam of light.**<br><br>**Bloom's Taxonomy Cognitive Level: Understanding** | **Differentiation**<br>**Below Proficiency:**<br><br>**Above Proficiency:**<br><br>**Approaching/Emerging Proficiency:**<br><br>**Modalities/Learning Preferences:**<br>• **Visual: Students will watch a Mystery Doug video. I will display it on the active board.**<br>• **Auditory: Students will listen to the video.**<br>• **Kinesthetic: The hands-on activity where they sort objects.**<br>• **Tactile: The moving around while sorting objects into transparent, translucent, opaque, and reflective.** |
| **Classroom Management- (grouping(s), movement/transitions, etc.)**<br>• **Large group – when other are talking, voice off and listening to the speaker.**<br>• **Group work – Students are to have voice level of 1 or 2 and should take turns respectively. Students should be focused on the game and not be talking about other things.**<br>• **Students will use flashlights and not shine them in others' eyes.**<br>• **Transitions – I will use an attention getter to get their attention to move on to the next activity. I use a timer for each round of activities.** | **Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)**<br>• **When other are talking. Students are expected not to be talking.**<br>• **Students are expected to raise their hand if they have a comment or a question.**<br>• **Students are expected to give full attention and listening earing to whoever is speaking.**<br>• **Students will be working in groups and should be respectful of everyone and when speaking in groups they should only hear their group members and no other group.** |

| **Minutes** | **Procedures** |
|---|---|
| **5** | **Set-up/Prep:**<br>• **Flashlights**<br>• **Various objects of transparent, translucent, opaque, and reflective**<br>• **Show video on Mystery Science website that explains translucent, transparent, opaque, and reflective.**<br>• **Print out sheets for the chart so students can record their findings.** |
| **10** | **Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)**<br>• **Explain what translucent, transparent, opaque, and reflective is. Have students turn and talk to see if they can come up with ideas of what objects they think is translucent, transparent, opaque, and reflective.**<br>• **Use a flashlight and demonstrate some objects to see if the students can tell what it is (transparent, translucent, opaque, and reflective)**<br>• **Have pictures of transparent, translucent, opaque, and reflective objects, bring objects in also (Examples of different light in nature.**<br>• **Use turn and talks to let students share ideas with each other.**<br>• **Use thinking time and hold the answer in your hand put it by your head to give everyone time to think and then have them share out what they were thinking.**<br>• **Students will understand the different affects light has on certain objects by determining if they are transparent, translucent, opaque, or reflective.** |

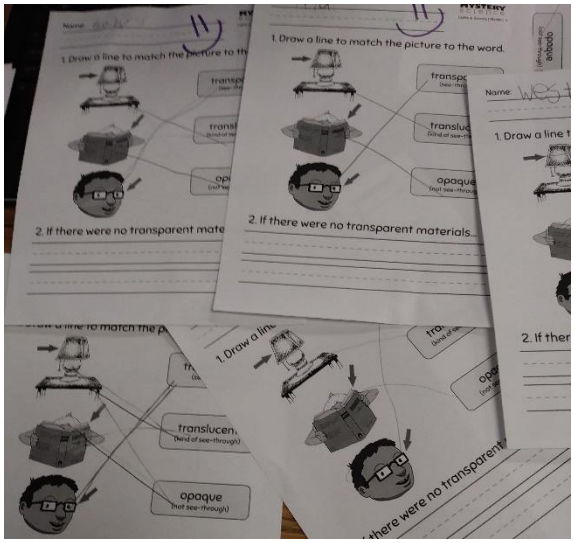
**Physical Science Lesson Plan**
**Date: February 26, 2021**

| | |
|---|---|
| **5** | **Explain: (concepts, procedures, vocabulary, etc.)**<br>• **Explain vocabulary – transparent, translucent, opaque, and reflective. I will have a picture/visual up on the board explaining the difference of how light affects objects that are translucent, transparent, opaque, and reflective.**<br>• **Tell students they will be in groups to have a chance to explore different objects and determine if they are transparent, translucent, opaque, and reflective.**<br>• **Each group will have one flashlight.** |
| **20** | **Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)**<br>• **Students will be exploring different objects with a beam of light (flashlight) to determine if they are transparent, translucent, opaque, or reflective. The objects that the students will be exploring/sorting include: clear cd case,**<br>• **Students will be given flash cards (vocabulary cards) with Transparent, Translucent, Opaque, and Reflective on them and they will sort the objects under the vocabulary word after determining where they go with a flashlight.**<br>• **I will engage with the students while they are doing the activity of looking at the various objects with a beam of light (flashlight).**<br>• **I will ask students questions as to why they put a certain object in that category that they did.** |
| **5** | **Review (wrap up and transition to next activity):**<br>• **A timer will be set for the activity and I will give reminders of how many minutes are left. Students will return to their seats when time goes off.**<br>• **I will ask what they liked and what went well. I will use the graph paper to have students determine what objects are transparent, translucent, opaque, or reflective.** |

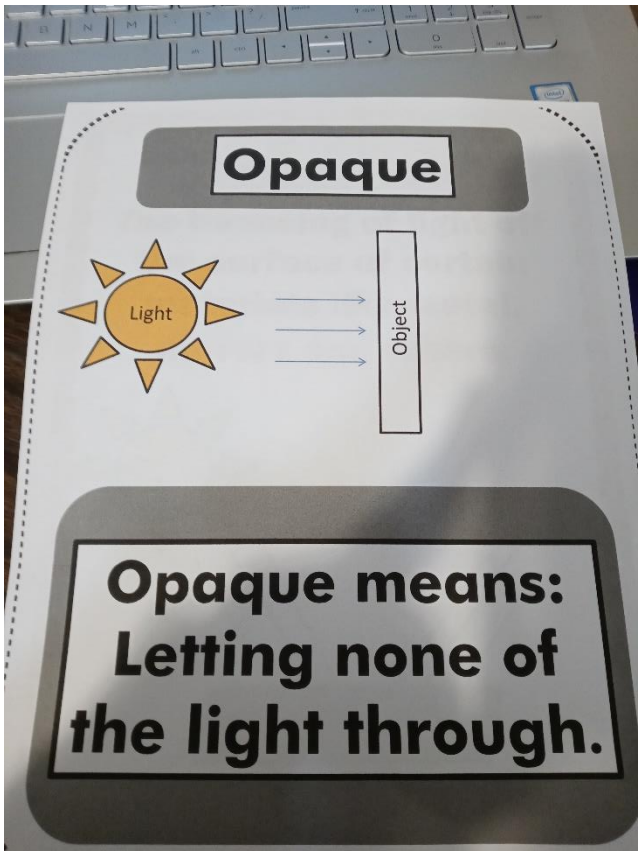
| | |
|---|---|
| **Formative Assessment: (linked to objectives, during learning)**<br>• **Progress monitoring throughout lesson (how can you document your student's learning?)**<br>**During activity, I will use turn in talks to share ideas. I will check for understanding of what we are doing with the objects and the flashlights.** | **Summative Assessment (linked back to objectives, END of learning)**<br>students will be given a paper with a graph on it and they will determine which object is transparent, translucent, opaque, reflective and they will put a check mark or x in the correct box.<br>**Grading Criteria:** Students will be able to identify which object is transparent, translucent, opaque, and reflective. I am checking to see if they understand that light affects different objects differently. |

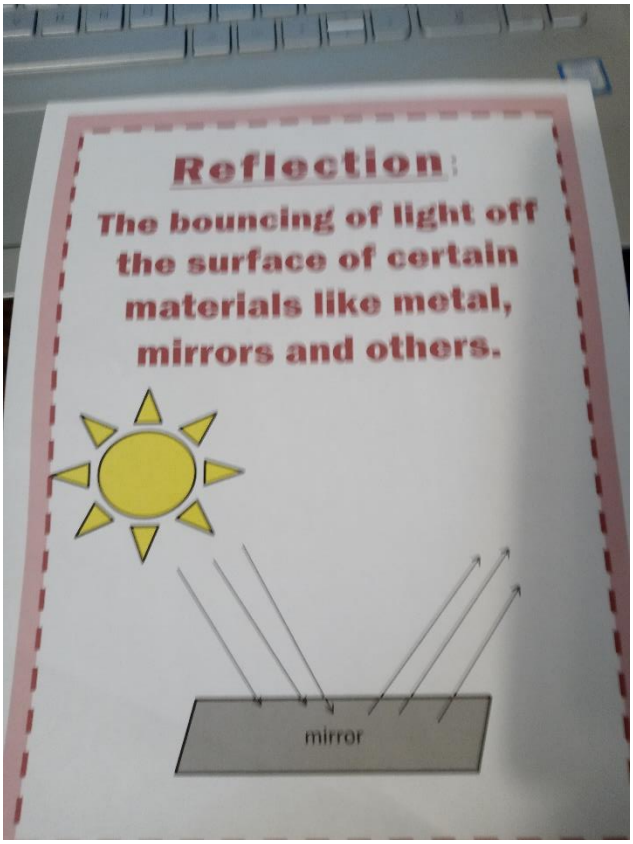
**Reflection (What went well? What did the students learn? How do you know? What changes would you make?):**
**This lesson could have gone better but it was okay. The video on the mystery science website did not work; technology problems, so I did have real examples of transparent, translucent, opaque, and reflective objects along with mini-posters that explained what they were. So the students got to see the differences between them. Then they did get to explore with other objects with a flashlight. They were in groups of three and did pretty good about taking turn with the flashlight.**
**We did not have time for the Challenge part of the lesson but if I would have been there longer, I would have taught that part afterwards and the students would have enjoyed that as well. The students did a short mini-quiz for the summative assessment part at the end after they explored the materials.**

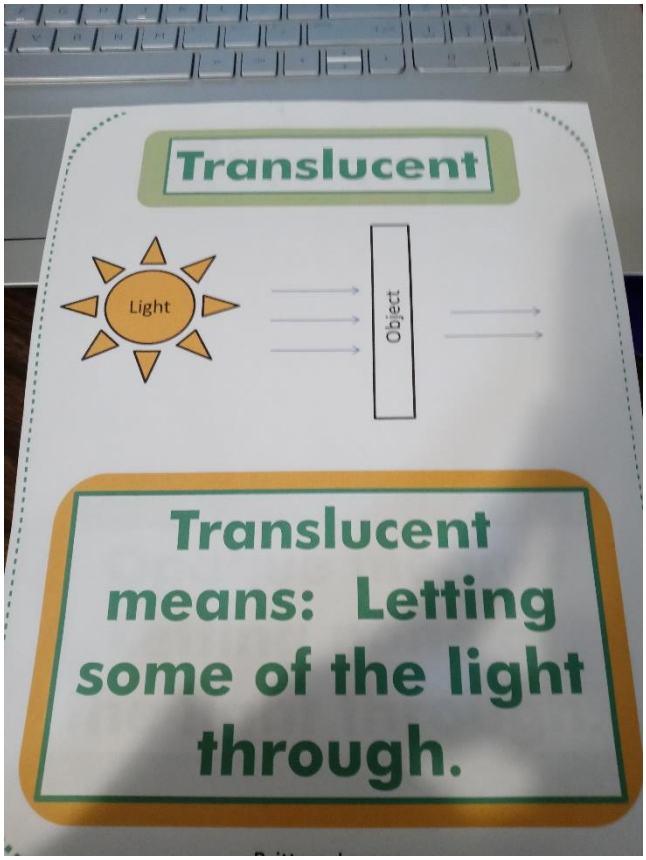
Amy Steiner



**Physical Science Lesson Plan**
**Date: February 26, 2021**




**Challenge!** **Name:_____**

Use your given objects to complete the challenges. Use your knowledge of light to fill in the blanks.

| **Vocabulary** |
| --- |
| Transparent<br>Opaque<br>Reflective Translucent |

1. Redirect a beam of light.
    a. Material that can redirect light is called _____
    b. What material did you use?_____
    c. Check your understanding, describe what happened.

2. Block a beam of light.
    a. Material that no light can pass through is called _____
    b. What material did you use?_____
    c. Check your understanding, describe what happened.

3. Make a beam of light less bright.
    a. _____ material only lets some light pass through.
    b. What material did you use?_____
    c. Check your understanding, describe what happened.

4. Put something in front on the beam that the light can pass through.
    a. If the light can pass through the material, it is _____
    b. What material did you use?_____
    c. Check your understanding, describe what happened.

**Physical Science Lesson Plan**
**Date: February 26, 2021**