Zoom Suggestions (Post while folks are joining)

• Set your view settings to “Speaker View” instead of “Gallery View”.
• Keep your microphone (and camera) muted outside of breakout rooms.
• While we wait for everyone to join, feel free to use the chat to let us know where you’re joining from, the organization or educational institution where you work, and something that has helped you manage while social distancing (e.g. Netflix series, craft project)!
Zoom Community Agreements

We recognize that the virtual world presents new challenges. In order to do our best to maintain a space of inclusivity, productivity, and respect, we ask that we all agree to the following:

• Use the chat to communicate to presenters and participants. Don’t say or share anything in the chat that can be perceived as disrespectful or disruptive.

• Keep your microphone (and camera) muted outside of breakout rooms.

• Be patient and understanding. We need to make room for everyone and understand that we’re not all in the same situation with technology. We all have varying levels of access to and familiarity with technological resources.

Anyone who violates the agreements or otherwise disrupts our Zoom community will be removed by our moderator.
Zoom Community Agreements: Breakouts

• Join your breakout room as soon as you’re prompted to maximize our time in our small groups.
• Remain in your breakout room until prompted to return to the main session, unless you are unable to do so. Alert your facilitator if you need to leave early.
• Share without expectations. What works for one organization may not necessarily work for others.
• Stories stay, lessons leave. Don't distribute what you heard from someone unless you have permission to do so.
Innovation and Household Items

Precollege Programs

&

U.S. Patent and Trademark Office
Innovation and Household Items

- Why Innovation matters? (USPTO)
- Connections to Distance Learning 4 All
- Who are Innovators? – video/reflection
- Innovation Timeline – interview/timeline
- Spot the Invention – online learning portal
- GRS The Robot Cat – household materials
INNOVATION MATTERS

Joyce Ward  
Director  
Office of Education and Outreach  
education@uspto.gov

Juan Valentin  
Education Program Advisor  
Office of Education and Outreach

Success mantra: “The sky is the limit! You have the ability to shape your own destiny.”
OPPORTUNITIES AND RESOURCES

https://www.uspto.gov/
www.uspto.gov/kids (landing page)
https://www.uspto.gov/kids/inventors-kids.html (young inventors)
www.uspto.gov/teacherinstitute

If educators want to reach out to us directly we can be reached at:
education@uspto.gov
Oregon Distance Learning for Middle School

Overview

Teacher-Led
Focus on essential and relevant learning for students
Opportunities for interdisciplinary, well rounded learning
Align with K12 standards

Learning/Activities
Independent research
Interviewing a family member
Drawing and creating
Critical reading

Nutrition/Wellness
Mealtime
Physical Wellness
What do your students have access to at home? (Think-Chat-Share)

Technology  
People  
Materials

Focus on what they have
REPLY IN CHAT
### Technology
- Telecommunications
- School Platform
- Internet
- Packets

### People
- Parents/Caregiver
- Professions
- Knowledge
- Pets
  - Teacher-student (video/phone/supplies)
  - Student-student (video/phone/drop-offs)

### Materials
- School supplies
- Craft supplies
- Household supplies
- Other (Green Space/Nature)
WHO ARE INNOVATORS?

REFLECTION

References to particular products, patents, trademarks, service marks, services, companies and/or organizations in the USPTO materials are for illustrative and educational purposes only and do not constitute or imply endorsement by the U.S. Government, the U.S. Department of Commerce, the U.S. Patent and Trademark Office, or any other federal agency.
Who do you think of as innovators?

- Reply in chat!

Learning Activity
- Extreme Sports
- Guided Reflection/Inquiry
- Offline Version
- https://www.uspto.gov/kids/MiddleSchool-ExtraordinaryInnovations.pdf

Media/Reflection
INNOVATION TIMELINE
INTERVIEWING
Innovation is a Dynamic Process

Changes in societal needs and wants over time

Then

Innovation

Advances in Science and Engineering that results in new technologies

Now
Innovation Timeline “Smoke Alarm”

1970
How did these look in 1970s? Materials? Size? Same use?

1995
How did we get here? Batteries? Carbon Monoxide?

2020
How do smoke alarms exist today? Cost? Extra functions? Same purpose?
Breakouts
Innovation Timeline “Smoke Alarm”

1970

How did these look in 1970s? Materials? Size? Same use?

1995

How did we get here? Batteries? Carbon Monoxide?

2020

How do smoke alarms exist today? Cost? Extra functions? Same purpose?
Innovation Timeline “Smoke Alarm”

- **1970**: Ionized Smoke Detector
  - $125
  - Reduction in costs and size

- **1995**: 10yr lithium ion battery operated smoke alarm in 1995

- **2020**: WiFi Carbon Monoxide

- **2020**: Wireless Interconnect Smoke Detector with Voice Alarm
  - $38.26
  - First Alert
  - *Write a Review* Questions & Answers (23)
  - Wireless connection so when one alarm sounds, all alarms sound
  - Exclusive voice warning with programmable location
  - Photoelectric smoke sensing technology
Who can your students talk to complete the Invention Timeline?

**Technology**
- Telecommunications
- School Platform
- Internet
- Packets

**People**
- Parents/Caregiver
- Professions
- Knowledge
- Teacher-student (video/phone/supplies)
- Student-student (video/phone/drop-offs)

**Materials**
- School supplies
- Craft supplies
- Household supplies
- Green Space
- Pets
- Other
Patents protect intellectual property!

- Legal
- Protection
- USPTO Helps!
- National Interest
What is in a patent?

- **Name(s)**
- **Details**
- **Numbers**
- **Pictures**
- **Language**
- **Diagrams**
- **Dates**

**United States Patent**

**Pfegerseder et al.**

**FIRE ALARM BOX WITH DIRECT AND SCATTERED LIGHT DETECTION AND GAS-SENSITIVE LAYERS**

**Inventors:**
- Anton Pfegerseder, Sauerlach-Argel; Andreas Hensel, Vaihingen, both of (DE)

**Assignee:**
- Robert Bosch GmbH, Stuttgart (DE)

**Notice:**
- Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

**Appl. No.:**
- 09/623,668

**PCT Filed:**
- Sep. 17, 1998

**PCT No.:**
- PCT/DE98/02750

**§ 371 (c)(1), (2), (4) Date:**
- Apr. 6, 2001

**PCT Pub. No.:**
- WO99/45515

**PCT Pub. Date:**
- Sep. 10, 1999

**Foreign Application Priority Data**
- Mar. 7, 1998 (DE) 198 09 896
- Int. Cl.** G01N 15/06; G01N 21/49; G01N 21/85**
- U.S. Cl.** 250/573, 356/417**
- Field of Search** 356/430, 437, 356/438, 337, 338, 339, 340, 336; 250/573, 574, 575, 214 R; 422/82.06, 82.09, 83, 86**

**References Cited**

**ABSTRACT**

A fire detector for detecting gaseous and dust-like combustion products, having at least one optical transmitter and at least two optical receivers for in each case outputting an electrical signal to a downstream evaluation unit. At least one of the optical receivers is disposed outside of a direct radiation range of the optical transmitter and acts as a scattered-light receiver, and a gas-sensitive layer is interposed in advance of at least one further optical receiver disposed in a direct radiation range of the optical transmitter this layer preferably absorbing light components of a specific narrow wavelength range in response to a contact with...
Spot the Invention

- Compare a household item to a patent
- Read a patent
- Make claims citing evidence how it is the same
- Claims
A CLAIMED INVENTION: A TOY FOR GEARS (GRS), THE ROBOT CAT
CREATING
A toy for GRS The Robot Cat

- Claimed Invention
- Vocabulary
- Claims, Evidence (image), Reasoning

Hi,

My name is Pat Pending and this is my robot cat GeoRS or GRS for short. I consider myself a science seeker, maker and tinkerer. I am curious about all things and experimentation is the best way to find out how things work. I hold patents on the GRS design, some of the parts of GRS, and methods of building and using GRS. Follow our path through the site to see how you can become a patent holder like me.

Thanks for stopping by!

Sincerely,
What can your students use to complete GRS, the Robot Cat invention activity?

**Technology**
- Telecommunications
- School Platform
- Internet
- Packets

**People**
- Parents/Caregiver
- Professions
- Knowledge
- Teacher-student (video/phone/supplies)
- Student-student (video/phone/drop-offs)

**Materials**
- School supplies
- Craft supplies
- Household supplies
- Green Space
- Pets
- Other
Breakouts
What can your students use to complete GRS, the Robot Cat invention activity?

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**Materials**
- School supplies
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- Household supplies
- Green Space
- Pets
- Other
Innovation and Household Items

Who are innovators?
- Online Video
- Offline Version
- USPTO Extension

Innovation Timeline
- Family Member Interview

Spot the Invention
- Internet Access
- Offline Version

A Claimed Invention: A toy for GeaRS (GRS), the Robot Cat
- Craft Supplies
- Digital Camera (optional)
THANK YOU! & Questions

Stay Well!

Precollege Programs &
U.S. Patent and Trademark Office

Innovation and Household Items