GRADE 5 LEARNING EXPERIENCE

Archaeological Dumpster Diving: What does it tell us about the past?

Summary

Learners will apply critical thinking to compare modern life to that of previous societies. Students will participate in a hands-on activity to predict what future generations may be able to discover about our daily life based on the waste materials we leave behind.

Objective

Students will learn how our use of materials has changed over time, how this impacts the environment and what we can do to help divert waste.

Pre-Activity

CLASS DISCUSSION

DIRECTIONS

Start a class discussion by asking students to suggest ways we can study the past:

- Storytelling, art, songs
- References—books, internet, maps
- Museums
- Artifacts
- Archaeology
- Elders

Ask students to think of day-to-day items and artifacts found underground by archaeologists.

- Pottery
- Glassware
- Stone tools (e.g. weapon points, knives, scrapers, etc.)

Ask students why these types of artifacts are found, but not others. Are these items the only things that people 'tossed out' years ago?

MATERIALS

Whiteboard and markers

Appendix A: Decomposition Times for Various Materials

DURATION

15 min

MAIN LEARNING OUTCOME

GRADE: 5

SUBJECT:

Social Studies

Outcome 2
Explain how environment influenced the development of an ancient society.

CROSS-CURRICULAR LINKS

Science

CHEMICAL AND PHYSICAL PROPERTIES:

Outcome 5
Investigate how physical and chemical properties and changes affect matter.

Indicator
Differentiate between physical and chemical properties of matter.

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CLASS DISCUSSION (cont'd)

Explain that these items are made out of material that takes a very long time to decompose (**See Decomposition Times, Appendix 1**).

Artifacts do not tell the whole picture. Explain that although decomposable items, like banana peels, are not found during an archaeological dig, that does not mean people did not eat them.

DISCUSSION FOR SMALL GROUPS

Over hundreds of years, humans have made life more and more convenient. Break students into small groups to brainstorm modern everyday items and what they have replaced from past years. Ask them to think about examples of household products that are currently disposable that would have been reusable in the past.

Examples include:

- Woven baskets vs. plastic bags
- Furs for clothes vs. denim
- Pottery cups vs. disposable cups
- Glass bottles vs. plastic bottles

Activity

ARCHEOLOGICAL DUMPSTER DIVING

DIRECTIONS

PREPARATION

Have students bring in a few small, clean, household items in a plastic or paper bag. (See examples, under Materials). As students hand them in, write a number on the bag and record the student's name to ensure bags are returned to their owners.

Alternatively, clean items can be collected from the classroom.

ACTIVITY

Explain to students they are archaeologists living **100 years in the future** who have just discovered these new "strange-looking" artifacts.

Have students imagine they have not seen these objects before. They must examine their findings to determine what each item might have been used for, and what it could tell us about the way people lived 100 years ago.

Students will use the **Dumpster Diving Activity Sheet (Appendix 2)** to record their notes.

DISCUSSION

In small groups, have students share their hypotheses about their items and stories with their classmates.

MATERIALS

Small, household items (Examples: egg cup, cookie cutter, measuring spoon or cup, shoelaces, clothes pin, paper clips, old keys, hair ties/clips, Mason jar lids)

MATERIALS
Appendix 2:
Dumpster Diving Activity Sheet

DURATION
30 min

DURATION
10 min

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Post-Activity

THEN AND NOW

DIRECTIONS

Imagine in a hundred years where future generations will find our garbage. In landfills? In the oceans? Everywhere? Discuss waste practices of the past compared to today.

Explain that in the past people would often bury garbage in their own backyard. What happened when the human population grew and grew? Landfills were required.

Show the class a video on landfills. What are the issues with landfills? (e.g. methane gas/climate change; too much waste; expensive to build)

LINK TO VIDEO www.youtube.com/watch?v=x4x8HsAhp8U
(08:30 Source: YouTube, SciShow)

MATERIALS

Internet
and projector

SciShow YouTube video
(8.5 min)

CONCLUSION: TAKING ACTION!

Ask students what can be done to reduce our need for landfills and to help the environment. Examples:

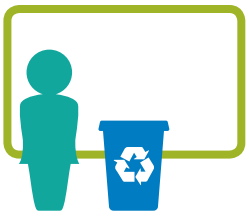
- Reduce, reuse and recycle
- Minimize waste
- Avoid disposable items
- Compost food and yard waste

Can these things be done in the classroom? At home? At school? In the community?

Assessment

FORMATIVE Observations can be conducted throughout the lesson, including during class discussions and the main activity.

SUMMATIVE (OPTIONAL) Collect and grade the Activity Sheet (Appendix B)



WASTE REDUCTION EDUCATORS

Divert NS provides funding to municipalities to deliver waste reduction education to schools across the province.

Your local waste reduction educator(s) provides the following services, and more, free of charge!

- classroom presentations
- green team set up
- advice on bins and signage
- tours of local waste facilities
- school waste audits

To find out more, visit divertns.ca

ABOUT DIVERT NS

Divert NS is a not-for-profit organization championing recycling in Nova Scotia. For over 20 years we've helped build a culture of recycling through environmental stewardship, education, and innovation. Divert NS operates the **Beverage Container Deposit–Refund Program** and the **Used Tire Management Program**. In addition, we work in collaboration with government, industry, and academia to divert waste-resources from landfill. Divert NS, in partnership with municipalities, delivers education and awareness programs to schools, businesses, and community groups. Divert NS also works to develop stewardship agreements and funds innovative research and development initiatives.

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APPENDIX 1:

ARCHAEOLOGICAL DUMPSTER DIVING

Decomposition Times for Various Materials

	ITEM	HOW LONG DOES IT LAST ?
1.	Banana Peels	3 – 4 weeks
2.	Cardboard	2 months
3.	Aluminum Pop Can	200 – 500 years
4.	Disposable Diapers	500 years
5.	Plastic Bags	1000 years
6.	Styrofoam	1+ million years
7.	Cigarette Butt	1 – 12 years
8.	Tin Foil	Never/unknown
9.	Plastic Pop Bottles	Never/unknown
10.	Milk Cartons	1 – 5 years

APPENDIX 1:

ARCHAEOLOGICAL DUMPSTER DIVING

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Name _____

Making Inferences from Waste

Waste Object	What I Know About It	What I Infer From It
EXAMPLE: Stretchy elastic circle covered with cloth-like material. Looks like a modern-day hair elastic.	Hair elastics are used to tie hair up (either for fashion or comfort)	Owner of trash likely had long hair

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