Back It Up: Backward Planning

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Time Frame 60 minutes

Essential Question(s)

How can we use backward planning to make sure tasks are completed on time?

Summary

Students complete a sequence puzzle, play a round of backward charades, and make a plan for an upcoming task using backward planning to make sure they can reach their goal on time.

Learning Goals

- Reflect on the challenges of thinking in reverse.
- Analyze a task for component parts.
- Evaluate when subtasks should be completed to accomplish a larger goal.

Attachments

- Activity Slides—Back It Up.pptx
- Backward Charades Cards—Back It Up - Spanish.docx
- Backward Charades Cards—Back It Up - Spanish.pdf
- Backward Charades Cards—Back It Up.docx
- Backward Charades Cards—Back It Up.pdf
- Backward Planning—Back It Up - Spanish.docx
- Backward Planning—Back It Up - Spanish.pdf
- Backward Planning—Back It Up.docx
- Backward Planning—Back It Up.pdf
- Ben-Hur Done That—Back It Up - Spanish.docx
- Ben-Hur Done That—Back It Up - Spanish.pdf
- Ben-Hur Done That—Back It Up.docx
- Ben-Hur Done That—Back It Up.pdf
- Sequence Puzzle—Back It Up - Spanish.docx
- Sequence Puzzle—Back It Up - Spanish.pdf
- Sequence Puzzle—Back It Up.docx
- Sequence Puzzle—Back It Up.pdf

Materials

- Activity Slides (attached)
- Sequence Puzzle (attached; one per group)
- Backward Charades Cards (attached; one copy for the class)
- Ben-Hur Done That handout (attached; 1 per group)
- Backward Planning handout (attached; 1 per student)
- Optional: Cardstock for printing sequence puzzle
- Optional: Ben Hur or another large book to demonstrate the size of the task

10 minutes

Engage

Teacher's Note: Preparation

Before beginning this activity, have the attached Sequence Puzzle cut out and placed in envelopes.

Using the attached **Activity Slides**, share the essential question and learning objectives on **slides 3-4**.

Place students in groups of 3-4. Hand out the attached **Sequence Puzzle** to each group. Show **slide 5**. Ask them to arrange the steps in order. After they have completed their puzzle, ask them compare with another group.

Show the correct sequence puzzle on **slide 6**. Discuss as a class: "How was the sequence of steps from the groups similar/different?" "How did they know which steps to put where?"

Explain that thinking about steps in order helps us to complete a task successfully. Ask: "How would the outcome of their sequence puzzle have been different if the steps had changed in order?" If students are unsure, have them mix up their puzzle and ask what would have happened if someone tried to complete the task with those mixed-up steps.

Sample Student Response

1. We all knew what had to be the start and end.
2. We had to think about what we would need to do after each step.
3. If the steps were mixed up, it would have been more of a mess than a successful plan.
4. The job wouldn’t have gotten done.

15 minutes

Explore

Teacher's Note

Cut out the Backward Charade cards in advance and print them on cardstock if possible. Feel free to let students write out their own suggestions if time allows.

Explain to students that a lot of what we do is automatic, like coming into class or getting ready for school in the morning. Then ask them "what if we had to reverse it?" Could they get from their desks to the door in exactly the opposite way from how they came in? Ask for volunteers and have fun with this reverse task. Watch for students turning around to walk (they should be walking backward).

Explain that since they have thought about what it looks like to come into class backward, or in reverse, they have the practice they need to play some backward charades. Move to **slide 7** and explain that for this game, each card on the attached **Backward Charades Cards** handout will have a task to act out with a partner, but they have to act out the task in reverse (putting away a book, eating a burger, grocery shopping).

Teacher's Note

You may need to model what a task looks like in reverse if students are getting stuck.

Share with your class that they have to think about the absolute last thing they do with each task and start acting it out. Continue to play rounds of charades as time allows.

Afterward, ask this question: *What was hard about thinking in reverse?* Was it harder to make guesses at the beginning of a task being acted out or the end? If students are unsure, act out the burger example. First, act it out forward: Walking to a counter, pointing at a menu, paying and pausing to note that we still haven't made it to the burger as we don't have the food yet. Our guess could be about anywhere we stop to purchase and pay for items. However, if we start at the end with biting into the burger, it is obvious what the task is that is being acted out. So there are times when knowing what the end goal is that helps us to paint the best picture.

Explain that in this activity, they will look at how to plan a task from end to beginning in a backward design method that helps ensure we have the time we need to do all we have to accomplish and understand our end goal.

15 minutes

Explain

Teacher's Note

This activity is done referencing the book *Ben-Hur* but could be completed with any large text. If students are currently reading a book for class, this lesson could be modified to reflect their coursework.

Show **slide 8**. Ask students how long they think it would take to read a book that size. What if it were all pictures? What if it were all written in a small font?

Explain that this book is *Ben-Hur*, doesn't include pictures, and will take a while to read. It has approximately 520 pages. Ask students to imagine that they have two months to read the book and to write a 5-page report. When should they get started?

Use **slide 9** to show the math for backward planning. If we wanted to read *Ben-Hur* in a month, we need to read about 17 pages each day. If we read *Ben-Hur* each day for 60 days, we will only need to read about eight pages a day.

Point out that backward planning from the goal of getting a book read until the time we start makes work seem more manageable. Reference the size of the book again. Such a large book could seem nearly impossible at first glance, but eight pages at a time isn't so intimidating. However, if they read for 60 days, how would they complete the 5-page report? When backward planning, we need to consider all tasks. So, if we want to finish on time, how much time before the due date should we begin writing?

Place students in groups of 2-3. Make sure each group has access to a calculator as they plan. Pass out a copy of the attached ***Ben-Hur* Done That** handout to each group. Remind groups their goal isn't to see how rushed they can be in putting off a task, and it also isn't about spending each day living and breathing *Ben-Hur.* They need time to rest and play and work on other class assignments over the next two months. Ask them to discuss in their groups what time frame seems manageable. Ask them to record their plan on the front side, **Part 1**, of the handout. Explain that there is not a line for every day, and they can put time spans in their planner (for example: Days 3-5).

Teacher's Note

Some students may say they prefer to wait until the week before the activity is due to start work on the reading and summary. If so, discuss procrastination and how waiting can affect the quality of our work.

10 minutes

Extend

Plans need to be flexible in order to adjust to life's unexpected challenges. When things don't go according to plan, we can't just give up. We need to be flexible and adaptable and adjust our plans. Have groups turn over their handout to **Part 2**.

Tell students that in those two weeks after they have begun their plan, a blizzard comes, power is out, and they have left their book at school. They are snowed in for a week. Assign them to use the backside of the handout to share what they would have already accomplished and then redesign their plan from the end to the time when they can return to school.

After providing work time, have groups share how their plans have to change. Did the work still seem doable, or did it become impossible? What is the most significant change they have to make? If they had known the blizzard was coming, would it have changed any of their original plans described on Part 1 of the handout? We can't always plan for the unexpected, but backward planning can help us adjust. We also need to keep in mind that since everything may not always go to plan, we should add some time into our backward planning for unexpected setbacks.

10 minutes

Evaluate

Have students work individually to select an upcoming goal (club trip, competition, deadline) they would like to make a plan for. Have them use the **Backward Planning** handout to list the end goal and the steps that have to occur to reach that goal. Record dates for completing each component.

Rationale

Regardless of the focus of the extracurricular activity, club participation can lead to higher grades (Durlak et al., 2010; Fredricks & Eccles, 2006; Kronholz, 2012), and additional benefits are possible when these clubs explore specific curricular frameworks. Club participation enables students to acquire and practice skills beyond a purely academic focus. It also affords them opportunities to develop skills such as self-regulation, collaboration, problem-solving, and critical thinking (Allen et al., 2019). When structured with a strong curricular focus, high school clubs can enable participants to build the critical social skills and "21st-century skills" that better position them for success in college and the workforce (Allen et al., 2019; Durlak et al., 2010; Hurd & Deutsch, 2017). Supportive relationships between teachers and students can be instrumental in developing a student's sense of belonging (Pendergast et al., 2018; Wallace et al., 2012), and these support systems enable high-need, high-opportunity youth to establish social capital through emotional support, connection to valuable information resources, and mentorship in a club context (Solberg et al., 2021). Through a carefully designed curriculum that can be implemented within the traditional club structure, students stand to benefit significantly as they develop critical soft skills.

Resources

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