



NEW YORK UNDER WATER



Scan to review worksheet

Expemo code:
1DEL-E25C-J793



1

Warm up

What do you know about floods? Test your knowledge with the quiz below.

- How many types of floods are there?
 - one
 - two
 - three
- How much warning can you get of a flood, depending on its type?
 - always at least a few days
 - from a few minutes to hours
 - from a few minutes to several days
- Name three factors that can increase flooding in the future.
 - _____
 - _____
 - _____
- Name two precautions that people who live in flood-prone areas should take.
 - _____
 - _____
- Name three factors that can reduce the risk of flooding.
 - _____
 - _____
 - _____



2 Vocabulary 1

Read the text below and choose the best option to complete each gap.

New York Under Water

In July, 2023, New York once again suffered extreme flooding, leading to one casualty, blocked roadways and _____¹. The storm that caused the _____² flooding, which pounded the region with 20 centimetres of rain, caused millions of dollars in damages.

New York residents live in constant expectation of the next flood, also fearing other life-threatening climatic events such as when Hurricane Sandy _____³ havoc on the region in 2012, so there is _____⁴ pressure on authorities to implement a more definitive solution.

For the U.S. Army Corps of Engineers, the answer is a \$52.6bn project that will see the construction of 12 movable storm barriers, as well as 50 miles of _____⁵. However, a group of residents, environmentalists and other experts are questioning the initiative. They want the government to adopt a more _____⁶ approach that considers natural solutions, as well as addressing more varied weather hazards (other than just storm _____⁷). The group is campaigning for the Corps to _____⁸ the proposal, which is due to be presented for Congress approval soon.

- | | | | |
|-------------------|---------------|----------------|--------------|
| 1. a. relocations | b. clearances | c. evacuations | d. evictions |
| 2. a. lightning | b. burst | c. flash | d. blast |
| 3. a. spread | b. swept | c. rose | d. wreaked |
| 4. a. ascending | b. escalating | c. mounting | d. launching |
| 5. a. floodfences | b. floodwalls | c. floodstops | d. floodbars |
| 6. a. universal | b. holistic | c. integral | d. overall |
| 7. a. rushes | b. surges | c. sweeps | d. gushes |
| 8. a. reboot | b. redirect | c. redraw | d. revamp |





3 Video 1

Watch the whole video about floods in New York showing interviews with Andrew Kruczkiewicz, climate scientist, and Tracy Brown, riverkeeper. Put the topics in the order they are discussed.

Video



- ___ possible negative effects of the plan to the environment
- ___ how the focus of the plan is not wide enough
- ___ possible negative effects of the plan to the health of the population
- ___ why the plan is not going to be effective
- ___ possible more natural solutions
- ___ other extreme climate events (not related to flooding) that affect New York
- ___ an overall description of measures and where they will be located
- ___ the current status of the Corps plan

Glossary

Superfund sites: polluted locations in the United States that require long-term solutions to clean up hazardous material contaminations.

4 Video: Part 1

Watch the first part of the video again (00:00-04:00) and say if the sentences below are true (T) or false (F).



1. The Army Corps have never spent as much on a project as in the New York one. _____
2. Andrew thinks the Corps plan won't change how tourists and residents see New York. _____
3. Tracy thinks the plan has too broad a focus. _____
4. Tracy lists other flooding issues that need addressing apart from storm surges. _____
5. Tracy defends solutions that are more integrated with nature. _____



5

Video: Part 2

Watch the second part of the video again (04:01-07:26) and complete the sentences below with a word or short phrase.



1. Tracy mentions the negative effect of the project on the _____ of fish.
2. She also has concerns over whether the project will create _____ of contaminants.
3. Andrew thinks the problem is in _____ the project to the public.
4. He suggests a _____ project might be needed to solve the issues of flash floods.
5. Tracy says that the period for _____ has just ended.
6. She doesn't see any _____ that the local leaders are going to question the project.
7. Andrew links all of New York's weather issues to _____.

6

Vocabulary 2

Part A: What does the underlined expression from the video mean?

... we're just going to end up with a hammer that hits one nail, and we have many nails ...

Part B: Complete the underlined expressions to talk about problems with the words in the box. Then discuss the questions in pairs.

catch feet foot pickle birds bull lightbulb nut

1. How do you solve a problem which is a hard _____ to crack?
2. Can you give an example of a _____ -22 situation?
3. Who do you call when you are in a _____ ?
4. Have you ever shot yourself in the _____ when dealing with a problem?
5. When it comes to problem-solving, do you prefer to take the _____ by the horns or wait to see what happens?
6. When was the last time you had a _____ moment at work or at school?
7. Are you good at thinking on your _____, or do you prefer to prepare beforehand?
8. When was the last time you killed two _____ with one stone?



7

Speaking

In small groups, role-play a meeting between representatives of the US Corps and the group that opposes their project. Follow the steps below.

- research information on the project
- prepare arguments (in bullet points)
- decide who is going to say what

8

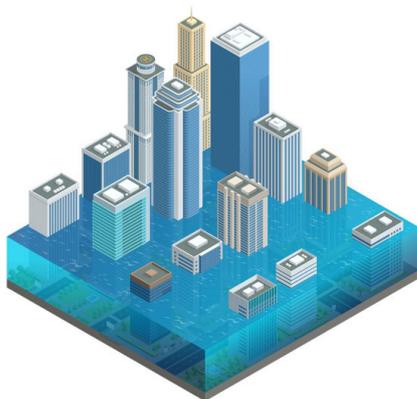
Extension activity 1

Complete the extract from the script with one word in each gap. Then watch the video again (00:00-01:18) and check.



Tracy: The Army Corps of Engineers plan for the New York, New Jersey Harbor is _____¹ biggest study area and would be the biggest and most expensive plan that the Army Corps _____² have done if it moves forward.

Andrew: This plan comes _____³ of that push to ensure that there is a lower chance of wide-scale impact from an extreme weather event _____⁴ as from Sandy. So there are various aspects of the plan that are important to keep _____⁵ mind. There are different types of storm surge barriers. _____⁶ are shore-based measures such as the sea wall. There are also risk reduction measures which are maybe smaller, which are smaller types of sea walls and barriers in Green Point, Brooklyn, Long Island City, Queens, and then also on the lower west side of Manhattan _____⁷ the Hudson River. What's proposed are approximately 12 to 20 ft high sea walls. So this will change our experience with waterways with the coastal areas of New York City. Areas _____⁸ have really brought the city together, _____⁹ for New Yorkers and also millions of visitors as well.





9

Extension activity 2

In pairs, look at the cues below and rebuild the interview from the video. Watch the video again (01:35-02:32) and compare.



1. biggest problems / plan / started out / too narrow / focus.

2. Corps / project, / single-hazard project / multi-hazard project.

3. started / single-hazard / storm surge impacts.

4. 100-year storm / massive water / ocean / landscape / flooding / communities.

5. what / needs / multi-hazard plan because / having storm surges / heavy rain events / loss of life / incredible damage / property.

6. sea level rise / monthly flooding / communities.

7. groundwater inundation / sea level rising / buried rivers and waterways / communities.

8. if / start / multi-hazard approach / say this / what / going / address, / end up / hammer / one nail / many nails / many challenges.



Transcripts

3. Video 1

Part : - 1 -

Tracy: The Army Corps of Engineer's plan for the New York, New Jersey Harbor is the biggest study area and would be the biggest and most expensive plan that the Army Corps will have done if it moves forward.

Andrew: This plan comes out of that push to ensure that there is a lower chance of wide-scale impact from an extreme weather event such as from Sandy. So there are various aspects of the plan that are important to keep in mind. There are different types of storm surge barriers. There are shore-based measures such as the sea wall. There are also risk reduction measures which are maybe smaller, which are smaller types of sea walls and barriers in Green Point, Brooklyn, Long Island City, Queens, and then also on the lower west side of Manhattan along the Hudson River. What's proposed are approximately 12 to 20 ft high sea walls. So this will change our experience with waterways with the coastal areas of New York City. Areas that have really brought the city together, both for New Yorkers and also millions of visitors as well.

Tracy: One of the biggest problems with the plan is that it started out with too narrow a focus. So when the Corps does a project, they can do a single-hazard project or a multi-hazard project. And they started this project as single-hazard only looking at storm surge impacts. So that's the 100-year storm massive water coming off the ocean breaking into our landscape and flooding our communities. What it needs to be is a multi-hazard plan because in addition to having storm surges, we have these heavy rain events where we are seeing loss of life and incredible damage to property. We have sea level rise, creating monthly flooding in more and more communities now. We have groundwater inundation from that sea level rising in the buried rivers and waterways in our communities. So if we don't start with the multi-hazard approach and say this is what we're going to address, we're just going to end up with a hammer that hits one nail and we have many nails and many challenges.

Tracy: So if you only look at storm surges, you end up at walls and gating off, you know, rivers and creeks and that's what this plan is currently recommending. But if you look at really how our local environment is changing in terms of flooding and the much more frequent flooding we experience, you start with things that address the frequent flooding and that can include nature-based infrastructure. That can include dunes and other living shoreline technologies and stopping developing on wetlands and flood plains. It can also include non-infrastructure plans like planned retreat from some areas, floodproofing, raising infrastructure. There's a whole tool kit that if you are looking at it comprehensively, we could get less expensive projects that rely more on nature-based solutions that can be built quicker.



Part : - 2 -

Tracy: In order to build the gates, they're building artificial islands and they're building permanent in-water structures. So they are limiting the flow, the exchange of sediment, the tidal energy, the fish migration. And in addition, when you build in-water structures in places like New York City, where you have lots of contaminated waterways from Superfund sites to the combined sewage that flows every time it rains into these waterways, you're creating contaminant hot spots.

Andrew: My understanding from reviewing the plan is that the infrastructure changes are tailored to coastal flood scenarios, which is fantastic. This is something that is needed and the modelling for those events is important to get right. However, in terms of communicating to the public and our understanding, the understanding of New Yorkers and the many visitors to New York about what type of floods these actions may prevent or mitigate, it's important to note that there are still questions about flash flooding and intense rainfall flooding that come up. So we need to think more about that. To what extent do these features change the risk of flash flooding? To what extent do they mitigate, mitigate the risk of flash flooding and then also what needs to be done? Do we need a similarly large program to specifically address flash flood risk?

Tracy: And now at this moment, we have just finished the public comment period on that preferred plan that they're recommending and they're about to send it to Congress to say this is the Corps recommendation and then it needs to be approved and funded in Congress. So we're at a moment now where our local leaders, the governors of New York and New Jersey, Hochul and Murphy, can say to the Corps, we don't approve this plan. We want some different, we want multi-hazards. Let's continue to work on it. Let's partner and get something better that then goes to Congress. We're not seeing any indication yet that that's going to happen and that's where we're trying to get the message out and call for our local representatives to come to the table.

Andrew: In New York City, we have seen devastating tropical cyclones. We've seen hybrid systems such as superstorm Sandy. We've seen very intense flash flood situations, causing loss of life and loss of property. We've seen heatwaves and we continue to see heatwaves also impacting loss of life, perhaps a new type of hazard or one that we're becoming more familiar with related to smoke from wildfires. All these types of hazards have some connection to the increased risk of extreme weather events. And part of that increased risk is due to climate change, and we are likely to see more of this type of extreme weather in the future.



Key

1. Warm up

5 mins.

Students take the quiz in pairs. Correct as a whole class, eliciting other information students know of.

Sources for the quiz:

https://www.cairns.qld.gov.au/_data/assets/pdf_file/0010/469117/Flood-quiz.pdf

<https://www.chiefscientist.qld.gov.au/publications/understanding-floods/floods-quiz>

- 1) c. three: (fluvial (river), pluvial (or flash floods) and coastal, or storm surge)
- 2) c. from a few minutes to several days
- 3) population growth, urbanisation and climate change
- 4) Keep a well-stocked household emergency kit and create a household emergency response plan
- 5) zoning and building regulations; dams and detention basins; flood awareness and education programs

2. Vocabulary 1

10 mins.

Students choose the best option to complete the text (remind them that some options might be possible, but one is the strongest collocation). Ask them to compare answers and discuss the meaning of the words they chose. Then correct as a whole class.

- | | | | |
|----------------|-------------|------------|-------------|
| 1. evacuations | 2. flash | 3. wreaked | 4. mounting |
| 5. floodwalls | 6. holistic | 7. surges | 8. revamp |

3. Video 1

10 mins.

Play the whole video. Students put the topics in the correct order. Correct as a whole class, but avoid discussing details yet, as they will watch the video again.

- an overall description of measures and where they will be located
- how the focus of the plan is not wide enough
- why the plan is not going to be effective
- possible more natural solutions
- possible negative effects of the plan to the health of the population
- possible negative effects of the plan to the environment
- the current status of the Corps plan
- other extreme climate events (not related to flooding) that affect New York

4. Video: Part 1

8 mins.

Students watch the video again and decide if the sentences are true or false. Before correcting as a whole class, ask them to compare answers in pairs and try to remember other details.



1. T - it's the most expensive project ever
2. F - it will change the experience
3. F - too narrow
4. T - heavy rain events, sea level rise, groundwater inundation
5. T - dunes, living shoreline technologies, planned retreat from some areas, flood proofing, raising infrastructure

5. Video: Part 2

7 mins.

Students read the sentences and try to complete them based on what they remember. They then listen again to check and complete the remaining ones. When correcting, play the recording again and pause at the key parts.

- | | | | |
|-------------------|---------------|-------------------|--------------------|
| 1. migration | 2. hot spots | 3. communicating | 4. similarly large |
| 5. public comment | 6. indication | 7. climate change | |

6. Vocabulary 2

Part A:

5 mins.

Read the sentence from the text and elicit the meaning of the idiom.

hammer that hits one nail - a solution for one specific problem

Part B:

5 mins.

Students complete the expressions with the words from the box. Correct as a whole class, eliciting the correct meaning of each expression (below), then ask students to discuss the questions in small groups.

1) *hard nut to crack - a problem that is difficult to solve*

2) *a catch-22 situation - a time when it is impossible to progress because you cannot do one thing before another thing, but you also cannot do the second thing before the first*

3) *in a pickle - in a difficult situation*

4) *shoot yourself in the foot - make a problem worse for yourself*

5) *take the bull by the horns - deal decisively with a problem*

6) *a lightbulb moment - a moment of inspiration*

7) *think on your feet - think and react quickly*

8) *kill two birds with one stone - to solve two problems with one action*

- | | | | |
|---------|--------------|-----------|----------|
| 1. nut | 2. catch | 3. pickle | 4. foot |
| 5. bull | 6. lightbulb | 7. feet | 8. birds |

7. Speaking

10 mins.

Form groups of 3 or 4 students and assign them either the role of US Corps or opposition group (ideally the same number of groups for each side). Allow them some time to research and prepare for the meeting, then pair opposing groups and ask them to role-play a meeting. Elicit ideas as a whole class.



8. Extension activity 1

15 mins.

Ask students to complete the extract with one word in each gap. They can rely on what they remember from listening, as well as which words fit grammatically. They then listen again and check. After correcting, you can use the extract to practise shadowing, i.e., play the extract one more time and students read out along with the speaker (not afterwards).

1. the 2. will 3. out 4. such 5. in 6. There 7. along 8. that 9. both

9. Extension activity 2

15 mins.

In pairs, students rebuild the dialogue based on the prompts. They then watch the video to complete the script and check.

1. One of the biggest problems with the plan is that it started out with too narrow a focus.
2. So when the Corps does a project, they can do a single-hazard project or a multi-hazard project.
3. And they started this project as single-hazard only looking at storm surge impacts.
4. So that's the 100-year storm massive water coming off the ocean breaking into our landscape and flooding our communities.
5. What it needs to be is a multi-hazard plan because in addition to having storm surges, we have these heavy rain events where we are seeing loss of life and incredible damage to property.
6. We have sea level rise, creating monthly flooding in more and more communities now.
7. We have groundwater inundation from that sea level rising in the buried rivers and waterways in our communities.
8. So if we don't start with the multi-hazard approach and say this is what we're going to address, we're just going to end up with a hammer that hits one nail and we have many nails and many challenges