

Inquiry Project Design Plan

Teacher/Designer Names: Egan, Luckasavage , Shehadeh	
Name of Project: Invasive Species, The Spotted Lanternfly	Grade Level: 3 rd
Est Launch Date:	Est Duration : 2 weeks
Disciplines Involved: Science, Technology, ELA, Art	
Problem Statement: We will encourage students to bring awareness to the impact of The Spotted Lanterfly on the community and the environment and develop solutions for eliminating them.	

STAGE 1: DESIRED RESULTS	
Big Idea: Invasive species	
Enduring Understandings: - The Spotted Lanternfly is destructive to the community/environment - Varying effects of an invasive species on the community/environment	Essential Question(s): (MEANT TO BE SHARED WITH STUDENTS) What impact does the invasive species, the Spotted Lanterfly, have on our community and the environment and what solutions can we develop to eliminate them?
Established Goals (Standards, Performance Indicators, Learning Goals): *choose relevant standards to unit/project plan timing and learning goals; do not need to use all disciplines below. ** unpack into SWK and SWBAT under identified standards as this will lead to aligned assessment design	
Science Standards: 3-LS4-3: <u>Habitats and Organism Survival</u> Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	
Social Studies Standards:	
Mathematics Standards:	
ELA Standards: 3W2: Write informative/explanatory texts to explore a topic and convey ideas and information relevant to the subject. 3W6: Conduct research to answer questions, including self-generated questions, and to build	

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knowledge.	
Technology Standards: - NYS Computer Science and Digital Fluency: - ISTE: 1.1c Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.. 1.3d Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.	
Social Justice Standards:	
Other (Art, SEL, etc): *Need an Art Standard from Pellegrino*	
Links to Standards/Reference Frameworks: NGSS , NGSS by DCI Nat’l C3 SS Framework , NYS K-8 SS Standards , Common Core , ISTE , Learning for Justice Social Justice Standards , CASEL SEL Framework , NYS CS and Digital Fluency	
Students will know (SWK):	Students will be able to do (SWBAT):
- Inferring is the act or process of reaching a conclusion about something from known facts. - Environmental conditions affected by the Spotted Lanternfly - Determine the environmental conditons the Spotted Lanternfly needs to support its survival.	Construct an argument with evidence that Spotted Lanternflies can affect and change an environment within a community. Write informative/explanatory texts to explore a topic and convey ideas and information relevant to the subject. Draw evidence from research to support analysis and reflection. Conduct research to answer questions, including self-generated questions, and to build knowledge. Use technology to seek feedback that informs and improves their practice Determine their learning in a variety of ways..

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	Build knowledge by exploring real-world issues and problems. Developing ideas and theories and pursuing answers and solutions.
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STAGE 2: EVIDENCE & ASSESSMENTS:

Performance Task Narrative:

Goal: *Provide a statement of the task. Establish the goal, problem, challenge, or obstacle in the task.*
The goal of this performance task is for students to understand how Spotted Lanternflies can affect and change an environment within a community and develop solutions to eliminate them.

Role: *Define the role of the students in the task. State the job of the students for the task.*
Scientists, researchers, problem solvers, engineers, teachers

Audience: *Identify the target audience within the context of the scenario.*
Classmates, teachers, administrators

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Situation: *Set the context of the scenario. Define the narrative.*
This lesson will encourage students to bring awareness to the impact of the spotted lanternfly on the environment. Students will research the spotted lanternfly and the effects it has on the environment.

Product(s): *Clarify what the students will create and why they will create it.*

- Students will create an awareness campaign of the Spotted lanternfly and the effects it has on the environment.
- Students will develop solutions describing ways to eliminate the spotted lanternfly.

Standards (criteria for success): *Provide students with a clear picture of success. Identify specific standards for success.*

- ☐ Rubrics
- ☐ Checklists
- ☐ Canva

Other Evidence/Assessments:

- Exit Tickets
- Pictures from drone
- Thinklink
- Pictures from tablet
- Paragraph reflecting on the impact the spotted lanternfly has on the environment

STAGE 3: THE LEARNING PLAN:

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Learning Activities

(potential layout below. Can be daily, divided by periods, or even using the Engineering Design Process to divide into stages such as Ask, Imagine, Plan, Create, Improve)

Week 1

Learning Goals:

- Activate prior knowledge: What is an invasive species?
- Do you know of any invasive species that live near us?

Learning Events:

- Teacher will introduce invasive species to the class by showing this Brainpop video:

<https://www.brainpop.com/science/diversityoflife/invasivespecies/>

- Divide the class into groups and have them conduct research on the spotted lanternfly.
 - Group 1: Where did they come from?
 - Group 2: What are they attracted to?
 - Group 3: What damage are they doing to our environment and community?
 - Group 4: Life cycle / 4 stages of life? (3D printer?)
 - Group 5: Why are they in our community?
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- Take a trip to Untermeyer Gardens to identify the spotted lanternfly in the community.
 - Students will use tablets to take pictures of spotted lanternflies in the community.
 - Video showing problem and solution

Nearpod Video”

https://www.nearpod.com/interactive-video/create/0dcc3762-b4a9-4219-a3a9-2e9449ca7922/edit?jwt=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJleHAiOiJlNDgyNjAsInRlc2giOiJg2NDAwLCJpc3MiOiJkZmF1ZCI6IjkyOGY4MDEyYTZhbnRhdGlvbml9pZCI6ImVudil6Imh0dHBzOi8vbnAxLm5lYXJwb2QuY29tLyIsImlzVGZhY2hlci6IjEifQ.jAFCEDEZlaEreYKh0nGnC7wbgC_lrc1ruQOnYegeIk&cancelUrl=&returnUrl=

Formative Assessments:

- Checklist
- Exit ticket
- Daily check ins

Notes/Resources:

Spotted Lanternfly Websites:

<https://kpcnotebook.scholastic.com/post/invasion-spotted-lanternflies>

<https://www.timeforkids.com/g56/bye-bye-lanternfly/?rl=en-790>

<https://www.dogonews.com/2023/5/16/beware-the-spotted-lanternfly>

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Week 2
Learning Goals: • Students will understand the concept of problem and solution. • Students will be able to design solutions to eliminating the spotted lanternfly.
Learning Events: What is the problem we have been investigating? Now that we have our problem and the information, we need to make a solution What is a solution Now we are going to brainstorm and find solutions to get rid of the spotted lanternfly Create small replications of solutions in art class Trip to Untermeyer Park to test out solutions • Take pictures with tablet and revisit in a few days to see if the solution worked
Formative Assessments: • Exit ticket • 3-2-1 Fact Sheet • Daily check ins
Notes/Resources:
Week 3
Learning Goals:
Learning Events:
Formative Assessments:
Notes/Resources:

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Week 4
Learning Goals:
Learning Events:
Formative Assessments: