

Title:

Test Review Day

Author(s):

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Date/Time Lesson to be taught:

November 14th, 2022

Course Description:

Name: Astronomy

Grade Level: 9-12

Honors or Regular: Regular

Lesson Source:

Information included in the review packet sourced from Dr. Hing's archives.

Concept Statement:

Students will complete a test review that touches on all the topics covered in the test they will be taking shortly. They will understand and be able to explain black bodies, spectroscopy, electromagnetic spectrums, doppler effect, and how they relate to astronomy.

Lesson Objectives:

Students will be able to explain how light and radiation are relevant to astronomy,

Students will be able to summarize the concepts being covered in their light and radiation test.

Virginia Standards of Learning:

PS.9 The student will investigate and understand the characteristics of transverse waves. Key concepts include:

- a) wavelength, frequency, speed, amplitude, crest and trough;
- d) the electromagnetic spectrum.

Materials List and Advanced Preparations:

- Warm up (25 copies)
- Electromagnetic puzzle station (1 set)
- Spectrum puzzle station (1 set)
- Test review packets (25 copies)
- Test review packet KEY (digital)
- Powerpoint summary presentation (digital)
- Exit ticket (25 copies)

Safety Concerns:

ENGAGEMENT		Time: 10 mins
What the Teacher & Students Will Do	Probing/Eliciting Questions	Student Responses & Misconceptions
Teachers will greet students as they enter the room		
Mr. H will refresh students on the doppler effect and direct them to answer the warm up prompt. "Where did you observe the doppler effect over your break? What was it?"		
Students will answer the warm up prompt on a sheet of paper. (same page will be used for exit ticket at end of class)		
Mr. H will ask some students to share their answers.		
Evaluation/Decision Point Assessment		Student Outcomes
Students will have completed the warm up and hold on to their paper for later use (exit ticket). Ms. Gradel will show the two review stations in the back of the room and split the class into two groups.		Students will be refreshed on the doppler effect and have a completed warm up sheet.

EXPLORATION		Time: 10 mins
What the Teacher & Students Will Do	Probing/Eliciting Questions	Student Responses & Misconceptions
Ms. Gradel will instruct one group to go to Mr. H's station (light waves puzzle) and the other group to come to Ms. Gradel's station (spectrum puzzle).		
Students will work together to put the cutouts into the correct positioning to complete the "puzzle" ; this will serve as a quick refresher of vocabulary and relation of words to images.		

EXPLORATION		Time: 10 mins
What the Teacher & Students Will Do	Probing/Eliciting Questions	Student Responses & Misconceptions
Students will complete their puzzle station and Mrs. Gradel will instruct the groups to switch. The next group will complete the station before returning to their seats.		
Ms. Gradel will direct students back to their seats to wait to be handed their review packet.		
Evaluation/Decision Point Assessment		Student Outcomes
When the groups have been switched and completed the stations, the teachers will give a thumbs up to say that their group has finished and is ready to go back to their seats. Ms. Gradel will start to explain the review packet.		All students will have completed both refresher stations and be prepared to complete their review packet.

EXPLANATION		Time: 45-50 mins
What the Teacher & Students Will Do	Probing/Eliciting Questions	Student Responses & Misconceptions
Mr. H will hand out the test reviews while Ms. Gradel explains that students may use their notes, previous assignments, and any guides or reviews they already have to answer the questions.		
When students receive their packet, they will individually complete it as the main assignment of the class.		
The teachers will facilitate the room and make sure students are not sharing or googling all the answers.		
Evaluation/Decision Point Assessment		Student Outcomes
After 45 minutes, students will have completed most or all of their review packet. Teachers will tell students to keep this and use it to study. Ms. Gradel will pull up the powerpoint.		Students will have a completed test review packet.

ELABORATION		Time: 10-15 mins
What the Teacher & Students Will Do	Probing/Eliciting Questions	Student Responses & Misconceptions
Ms. Gradel will direct students to the front of the class where she will hold a brief summary/review powerpoint presentation lecture.		
Students will listen and ask any questions needed during the presentation. They can add notes on their review page if wanted.		
Ms. Gradel will finish the lecture and give the floor back to Mr. H to close out the class		
Evaluation/Decision Point Assessment		Student Outcomes
Ms. Gradel will finish the presentation and ensure there are no questions left from students.		Students will have tied up their knowledge of the test material and have added some notes to their review pages.

EVALUATION		Time: 8-10 mins
What the Teacher & Students Will Do	Probing/Eliciting Questions	Student Responses & Misconceptions
Mr. H will hand out the exit ticket and direct students to write it on the same page as their warm ups. "What are you still confused about or need to study more for the test? How will you fix this confusion before test day?"		
Students will complete the exit ticket prompt and turn it in to		

EVALUATION		Time: 8-10 mins
What the Teacher & Students Will Do	Probing/Eliciting Questions	Student Responses & Misconceptions
the teachers before leaving the room.		
Evaluation/Decision Point Assessment		Student Outcomes
Students will have completed the prompt and appear ready to leave the classroom. Teachers will collect it and say goodbye and thank you to the class for having them.		Students will have answered both the warm up and exit ticket prompts for the teachers to keep as artifacts.

Attach any SUPPLEMENTARY MATERIALS (handouts, worksheets, data collection tables, assessments, etc.) as part of your lesson plan.

TEST REVIEW (document)

REVIEW KEY (document)

PowerPoint