**Тема CLIL Science. Forensics.**

 **Grade 10**

 By the end of the lesson students will learn how to identify the different fingerprint patterns as well as other details that help investigators match fingerprints. They will be able to practice making fingerprints. They will learn about DNA and its use in forensic science. The studeents will be able to make the model of DNA

Objectives

- to enrich pupils’ knowledge on the topic “Solving the crime”;

- to practice listening and reading skills;

- to teach pupils to form their own thoughts;

- to widen pupils’ outlook as to the topic;

- to develop pupils’ memory and creative skills;

- to upbring positive attitude to foreign language.

Equipment and materials: сomputer, interractive whiteboard, clear tapes, pencils, twizzles, small mashmellow, toothpicks, text for listening, books, set of cards, sand clock.

Lesson plan

1.Greeting

1.Lead in

1/ Review of crime vocabulary

T. I ‘m glad to see you.We have unusual lesson today.We have guests. We’ll revise the words. We ‘ll do many interesting exersises. We’ll start the lesson with Mime or define Game and then you’ll tell me what our topic of the lesson is. Take the card and try to define (explain) the word or demonstrate the meaning of the word through a mime (show

 judge blood prison punishment magnifying glass thief

2. T. One more task. Guess the word correctly which is hidden here Write in the copy books.

draprtnraielosnmtpoy

 Hgckrifddmhjivcnafdlh (criminal)

sawinbtmsnaloedcsatsep (witness)

dactilwedusaetf (clue)

 frasiogtlndwvateyr (solve)

mcaeroniplmwsaet (crime)

afuilhnegetuirlpaeraimdnwdtaksol (fingerprints)

T: So, What are we going to speak about? Did you guess? Crime, solving the crime and also about Forencics ( криміналістика)

3. NaNow your eyes and brain are warmed up, let’s test who in the class is good at noticing small details about things. You will have half a minute to study the photo of a crime scene on the next slide. ( пісочний годинник)

Try to pay attention to details you have to answer 10 questions about the crime scene! Don’t write anything.

4. Reading and listening the text. P. 143 (sb)

T. Read and lisyten to the text and be ready to answer the question.

 What do you think a forensic scientist does?

(check the evidence, analyze, carry out the experiments, study the dead bodies to find out how and when they died)

5. Look though the text and find words in the text to match photos A-E.

6. Now we’ll see how well you understand the text. Answer the questions. Післятекстові запитання ( Picker’s wheel)

7. Reading

T. What makes us unique (fingerprints) What are the 3 fingerprint principles ( 3 учні читаючи виділяють основне)

8 Вчитель презентує нові слова arches, loops, and whorls. ( показує у повітрі і просить повторити слова кілька разів)

9. Виконання вправ на розпізнання видів відбитків пальців I think…. I suppose…

Answer Key: A - Whorl, B – Whorl, C – Loop, D – Arch, E – Arch

10. It’s interesting fact that: 60% of people have loops, 35% have whorls,

and only 5% have arches

11. Now it’s high time to make some prints.

We need a pencil, a piece of paper and some clear tape.

What should we start with/ Use the pencil to make nice dark spot on the paper ( realy dark)

Put you finger on your forehead. Rub here to add extra oil on your finger to make print

Press your finger on the dark spot back and forth and press your finger down the sticky side of the clear tape

Carefully peel the tape off and stick it to the clean side of piece of paper. My look like the whorle. What about you? ( Діти досліджуютть своєї відбитки)

12 How many loops ( arches, whorle) do we have?

 Let’s summarize our results. (Один учень біля дошки записує результати)

What about the persentage, work in pair and count what persentage it is.

13 Перегляд відео ( 2 хв)

T. What else make us unique? (DNA)

Watch the video and and then we’ll work in groups and try to constract the model of DNA

Let’s revise the bases in your DNA model. What are the possible base pairs?

14 Project work

15 Project presantation who will present the model How does it look like, What is it made of

16. Reflection

We’are coming to the end of the lesson. Continue the sentences

1. Today on the lesson….
2. Today I liked…..
3. Today I learned….
4. Next lesson I’ll try to…

17. Summerizing Thank you for your work.

HW is to write to How can forensic scientists help the police to solve the crime.