Toxic!

EAE Learning objectives for this lesson

- Improve your comprehension.
- Increase your vocabulary.
- Learn and practice phrasal verbs.

Toxic
Poisonous
Hazardous
Dangerous
Harmful

Activity One - Discussion. *Discuss these points with your teacher/partner:*



1.Do you wear make-up or face creams on a regular basis?
2.Do you you perfume or after shave or deodorant regularly?
3.Are you aware of what is in the products you use?
4.Do you check the labels before buying them?
5.If you do then what are you looking for?
6.Which ingredients do you expect to be in your products?
7.Do you expect them to be safe?
8. Do you know of any dangerous molecules or additives you should avoid?

Activity Two - Let's move!.

With a new partner create a choreography with movements to illustrate the lyrics of this song. Each verb needs to be shown through a movement. When you have practiced we will play the song and everyone will perform their choreography. Your teacher will choose the best one! *Which of the verbs are phrasal verbs?*

BRITNEY SPEARS Toxic

Baby, can't you **see**?
I'm **calling** a guy like you
Should wear a warning
It's dangerous, I'm **falling**

There's no escape
I can't wait, I need a hit
Baby, give me it
You're dangerous,
I'm **loving** it

Too high, can't **come down**
Losing my head
Spinning around and around
Do you **feel** me now?

With a **taste** of your lips
I'm on a ride
You're toxic, I'm **slipping** under

With a **taste** of poison paradise
I'm addicted to you
Don't you know that you're toxic?
And I **love** what you do
Don't you know that you're toxic?

It's getting late
To **give** you **up**
I **took a sip** from my devil cup
Slowly, it's **taking over** me

Too high, can't **come down**
It's in the air
And it's all around
Can you **feel** me now?

With a taste of your lips
I'm on a ride
You're toxic, I'm slipping under
With a taste of poison paradise
I'm addicted to you
Don't you know that you're toxic?

And I love what you do
Don't you know that you're toxic?

Don't you know that you're toxic?

With a taste of your lips
I'm on a ride
You're toxic, I'm slipping under
With a taste of poison paradise
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With a taste of your lips
I'm on a ride
You're toxic, I'm slipping under
With a taste of poison paradise
I'm addicted to you
Don't you know that you're toxic?

Intoxicate me now
With your loving now
I think I'm ready now
I think I'm ready now

Activity Three - Reading.

Read the text paying attention to your intonation and stress:

A nano-particle is a microscopic particle with at least one dimension less than 100 nm. Nano-particle research is currently an area of intense scientific research, due to a wide variety of potential applications in biomedical, optical, and electronic fields.

Nano-particles have been introduced into just about every type of personal care product on the market, including sunscreen, shampoo, conditioner,anti-wrinkle cream, foundation, face powder, lipstick, blush, eye shadow, and nail polish. The only labeling you are likely to see is "micronized", which may indicate that companies have used nano-particles of certain ingredients in the product. These nano-particles are tiny manipulated versions of existing chemicals, but they present new risks that have not been evaluated and are not yet understood.

Titanium dioxide is a white solid used in house paint for example. Titanium dioxide nano-particles are so small that they do not reflect visible light, so they cannot be seen. They are used in sunblock creams because they block harmful ultraviolet light from the Sun without appearing white on the skin. But we don't know much about the potential side-effects.

Some cosmetics also contain 'liposomes', which are fatty nano-particles. Liposomes also have great potential in the pharmaceutical industry, as they can deliver tiny doses of medicines direct to cells. But again we don't know if this could have dangerous repercussions in cosmetics.

Basically, since the properties of a given nano-particle are not easily predicted by studying the substance from which it is made, there are worries that nano-particles may have undiscovered side-effects.

Nano-particles have a very large surface area compared to their volume, so they are often able to react very quickly. This makes them useful as catalysts to speed up reactions. For example, they can be used in self-cleaning ovens and windows. However, there is also the possibility that they might speed up reactions in living things in unpredictable ways, perhaps causing illness or death.

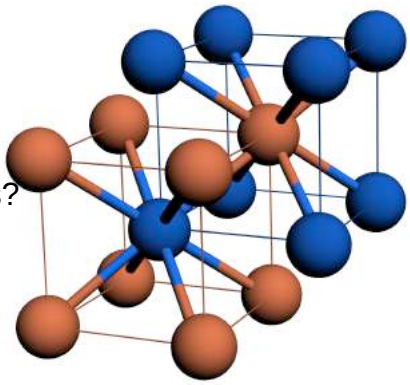
There are also other ingredients in cosmetics apart from nano-particles, which could be bad for your health. Heavy metals like lead, arsenic, mercury, aluminum, zinc, chromium and iron are found in a wide variety of personal care products including lipstick, whitening toothpaste, eyeliner and nail color. Some metals are intentionally added as ingredients, while others are contaminants. Exposure to metals has been linked to health concerns including reproductive, immune and nervous system toxicity. More than 10,000 ingredients are allowed for use in personal care products and the average woman wears 515 of them every day. Very little is known about the health effects of these chemicals. More than 90% have never been tested for their effects on human health, and complete toxicity data are available for only 7% of them. Even though government agencies are aware of the health hazards of some ingredients, such as hydroquinone or phthalates, they are still allowed in personal care products.

A woman may ingest more than four pounds of lipstick in her lifetime - even more if she wears it every day. Mainstream lipsticks are composed of synthetic oils, petroleum waxes and artificial colors. The colors usually come from coal tar dyes, which can cause skin irritation and allergies, and some may cause cancer. Lead is often found as an impurity in the colors used in lipstick. Research found that 21 of 26 lipsticks tested contained lead. Lead is extremely toxic to the nervous system and can cause developmental problems for children. There were also traces of arsenic, cadmium and other heavy metals in lip tints and glosses. In addition, these tests showed that not only lip products but all face makeup including products such as foundation, concealers and eyeliners contained traces of some heavy metals.

To find out more - http://www.lesstoxicguide.ca/index.asp?fetch=personal

Activity Four – Comprehension questions.

1.What is a nano-particle?
2.Why are scientists interested in nano-particles?
3.Why could they be harmful when used in cosmetics?
4.Why are titanium dioxide nano-particles used in suncream?
5.What are liposomes?
6.Why do nano-particles react quickly?
7.Which other harmful ingredients can often be found in cosmetics?
8.Are they always added intentionally?
9.What kind of health side effects can they have?
10.How much lipstick does the average woman ingest in her life?



Activity Five – Phrasal verbs a reminder.

A phrasal verb is a verb plus a preposition or adverb which creates a meaning different from the original verb.

Some phrasal verbs are intransitive. An intransitive verb cannot be followed by an object. (He suddenly showed up - show up can't be followed by an object).

Some phrasal verbs are transitive. A transitive verb can be followed by an object. (I made up a story - here made up is followed by an object).

Some transitive phrasal verbs are separable. The object is placed between the verb and the preposition. (I talked him into giving me a lift to the party).

Some transitive phrasal verbs are inseparable. The object is placed after the preposition. (I am looking into it).

Some transitive phrasal verbs can take an object in both places. (I looked up the number in the phone book, OR, I looked the number up in the phone book). WARNING! Although many phrasal verbs can take an object in both places, you must put the object between the verb and the preposition if the object is a pronoun. (I made it all up.)

Activity Six – Phrasal verbs race.

In small teams: *(Please do not prepare this at home).*
Use the following ***phrasal verbs*** to write a short text about **the use of various harmful substances in cosmetics** and to **give your opinion on the subject. Try to predict how things might evolve in the future.** You can use a dictionary. The team who finishes first gets 5 points and the team who uses the most of the phrasal verbs correctly gets 5 points. (Your teacher will time you!). Start by discussing these questions in your group and **then** use the phrasal verbs.

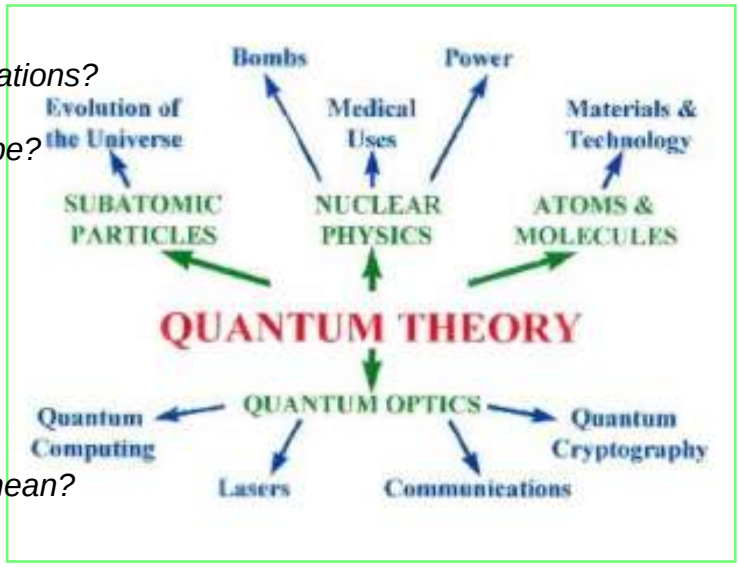
To break down	To count on	To get around
To break out into	To find out	To take off
To come up with	To point out	To mix into
To go on	To throw away	To take over
To watch out for	To fill up	To come out

Activity Seven - Video.

Watch the video - attention - there is some French in it - use it as an opportunity by reading the subtitles... Read the questions first so that you know what to listen for. Remember that you are not supposed to understand everything? We will be watching the first ten minutes of the video - only once. *(You **can** prepare this at home by watching the video).*

http://www.youtube.com/watch?v=eCpkq_AeX50

1.*How are they looking at the world in the beginning of this video?*
2.*How does the presenter explain the dimensions of nano technology?*
3.*What are the white balls she talks about?*
4.*What can nano technology be used for?*
5.*How were nano particles used in the demonstrations?*
6.*How do nano particles enable this to happen?*
7.*What is the French scientist doing with his probe?*
8.*What's the tip made up of?*
9.*What are the atoms swapping?*
10.*What do they show you a relief map of?*
11.*What does the Spanish scientist explain?*
12.*What are atoms made up of?*
13.*What's the shock she tells us to prepare for?*
(Brace yourself = get ready..)
14.*What's the tunnel effect?*
15.*To gouge out, to etch - what do these verbs mean?*



Activity Eight - Role Plays.

With your partner/teacher act out one of the following scenes:

A.*It's 1909 and you are* Hans Geiger and Ernest Marsden. You scatter alpha particles off a gold foil and observe large angles of scattering, suggesting that atoms have a small, dense, positively charged nucleus. This is a major breakthrough and you get really excited about it!

B.You are the CEO of a major cosmetics company. It has just been discovered that there is a link between throat cancer and one of your most popular face and neck creams. You give a press conference to try to reassure the public. One journalist present asks a lot of awkward questions.

C.You work for the government and you are interviewed by a journalist on the news about the dangers of nano-particles for the environment. You want to assure the public that they can trust the government to take action, however the journalist has some difficult questions for you.

D.You are **Paul Dirac** and you combine quantum mechanics and special relativity to describe the electron. You try to explain this to your wife but she really doesn't understand. You are a slightly mad scientist and you get a little carried away trying to explain.