



Fundamentos de Sensoriamento Remoto



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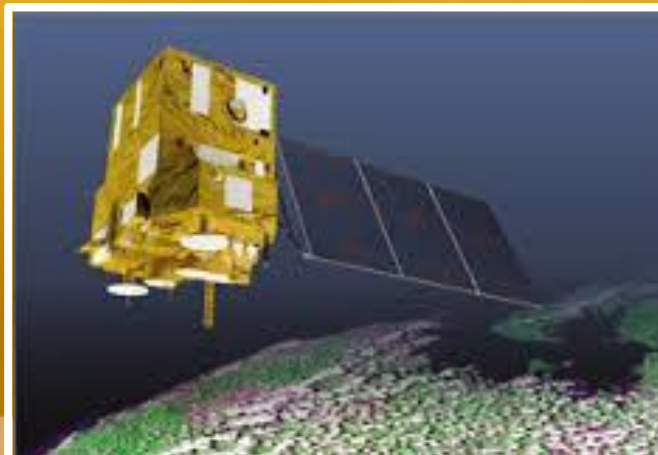
São José dos Campos - SP
Julho/2019

SENSORIAMENTO REMOTO

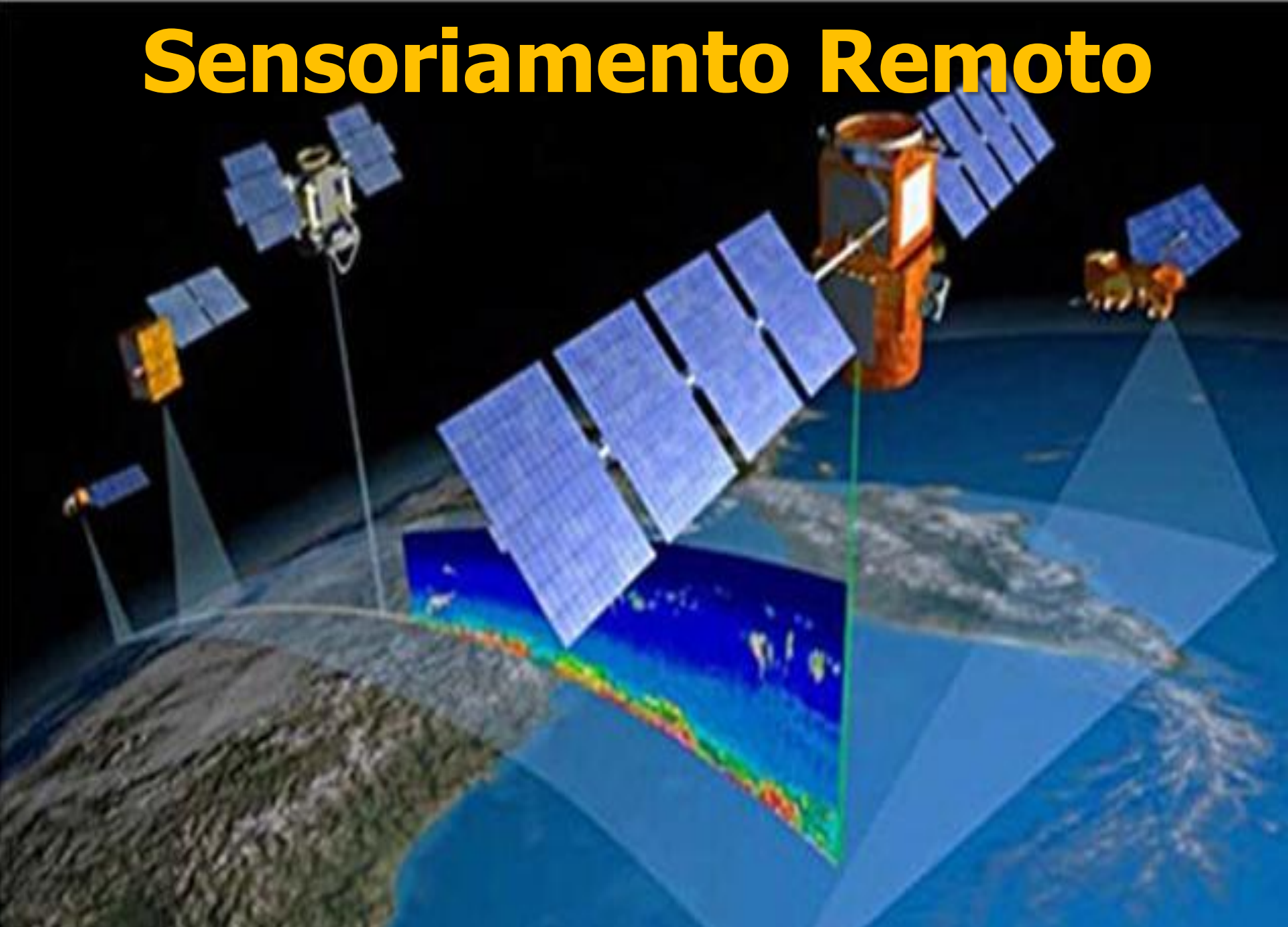
<https://climate.nasa.gov/climate-resources/14/video-the-home-frontier/>



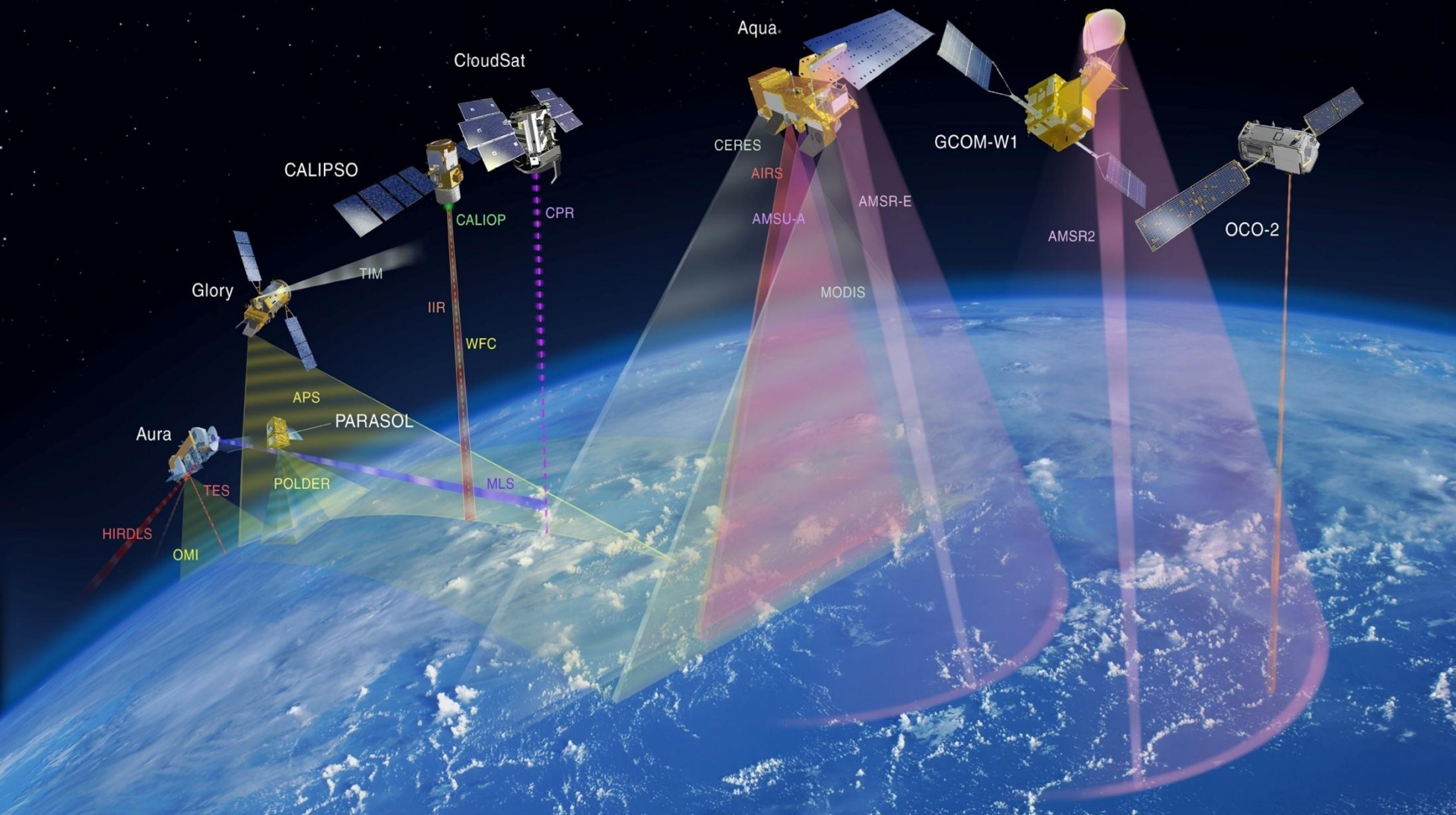
ORIGEM



Sensoriamento Remoto



https://climate.nasa.gov/earth-now/?vs_name=visible_earth&dataset_id=852&group_id=53&animating=f&start=&end=



Monitoramento da Atmosfera e dos Recursos Terrestres

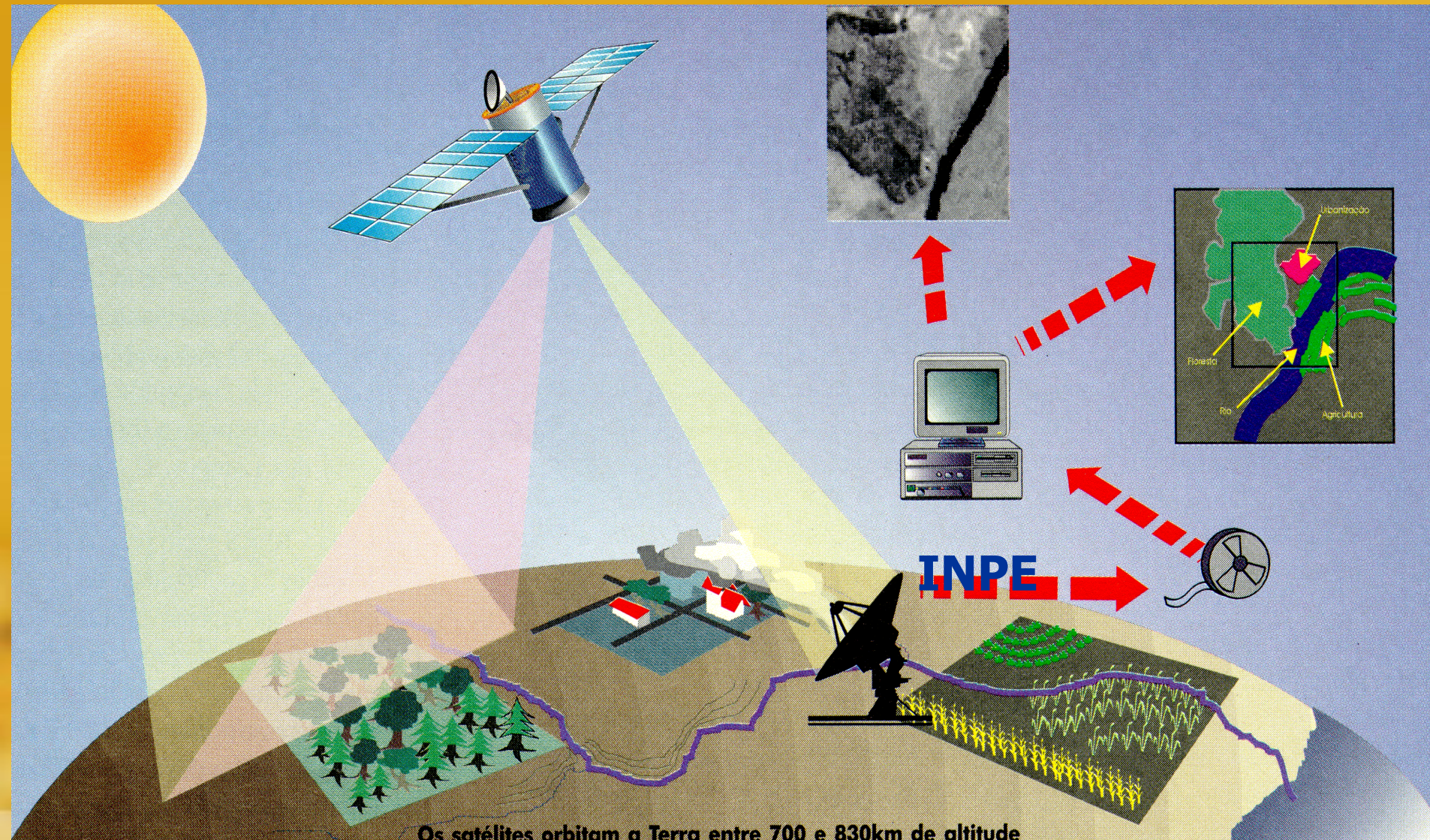






Curso de Uso Escolar de Sensoriamento Remoto - Inpe

Sensoriamento Remoto



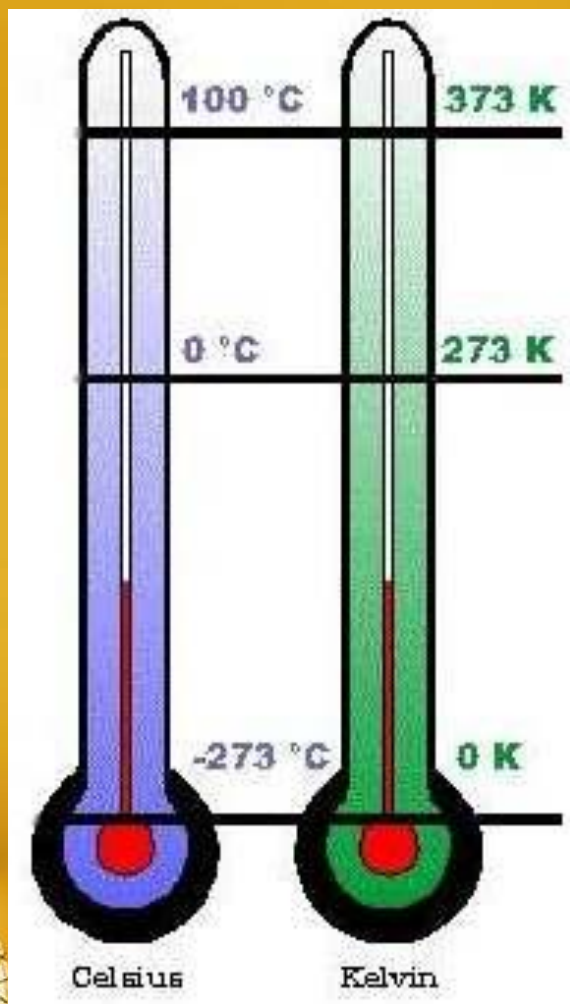
Os satélites orbitam a Terra entre 700 e 830km de altitude

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Propagação de Energia



Relação entre as escalas Celsius e Kelvin



$$0 \text{ K} = -273,16^{\circ}\text{C}$$

$$T_{\text{C}} = T_{\text{K}} - 273,16$$

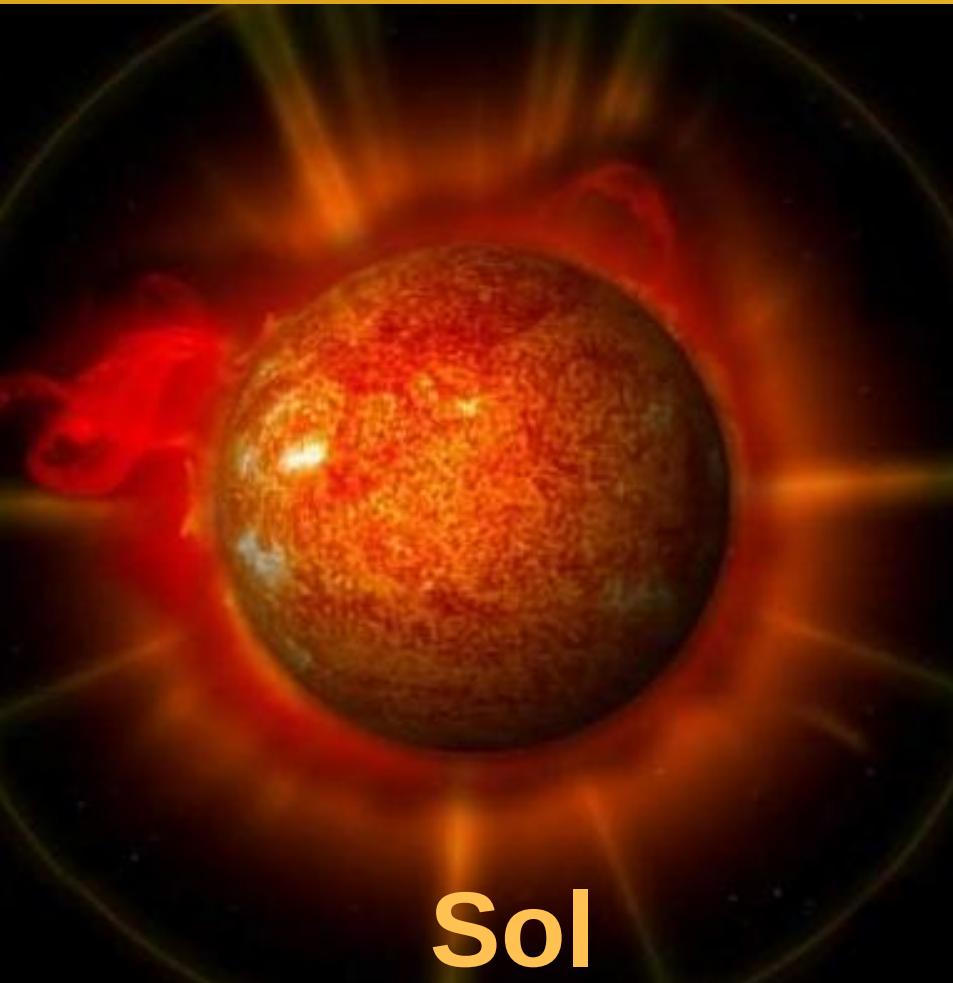
T_{C} = temperatura Celsius

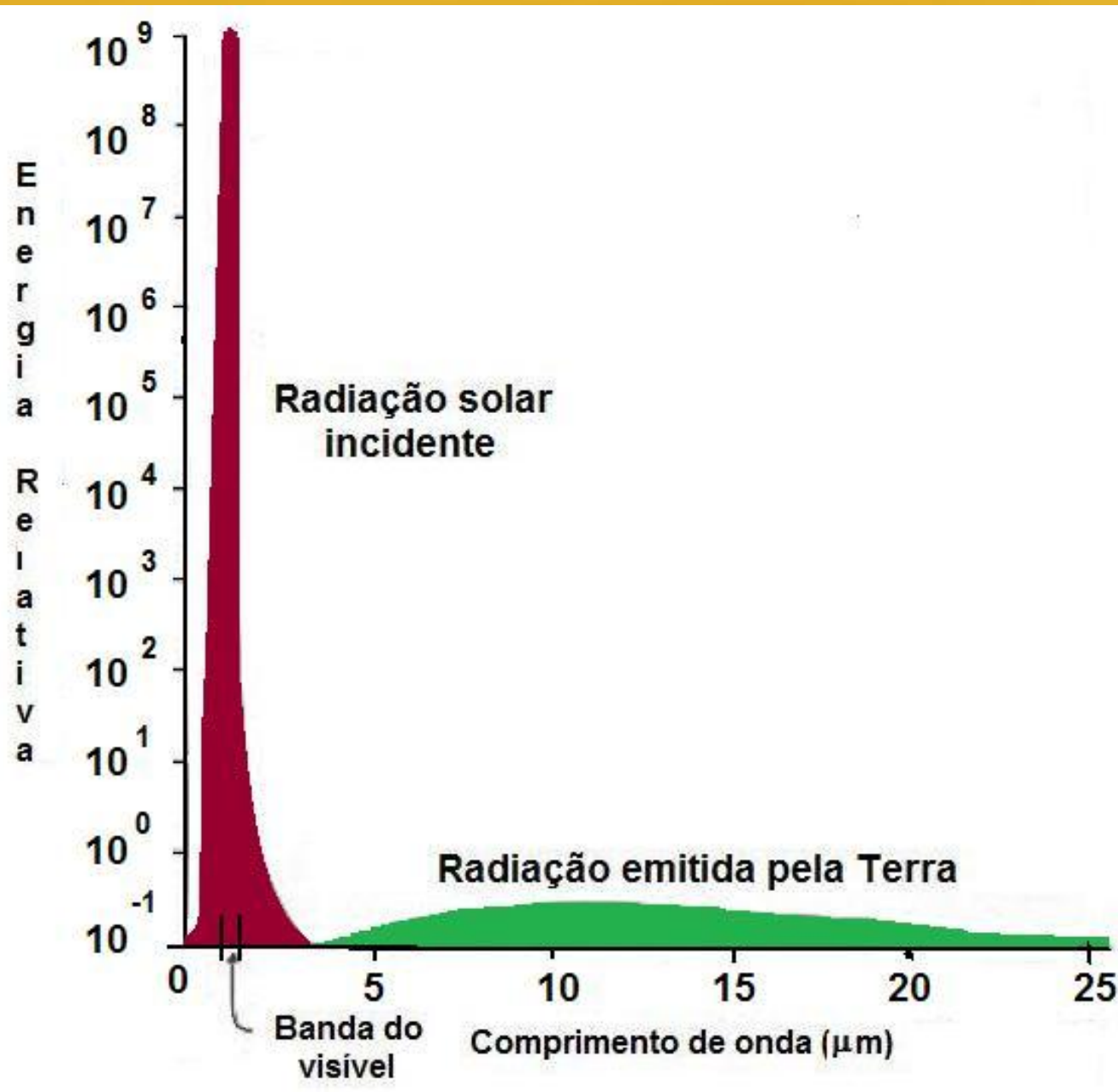
T_{K} = temperatura Kelvin

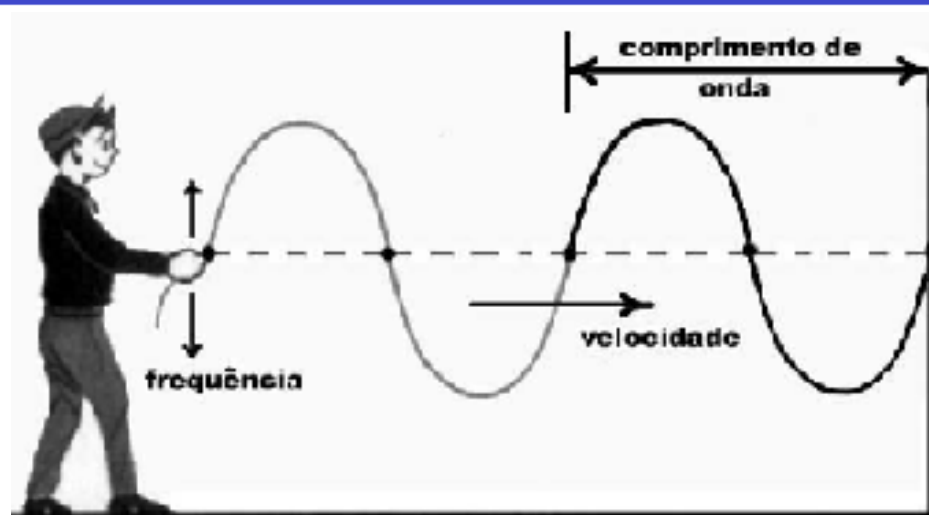
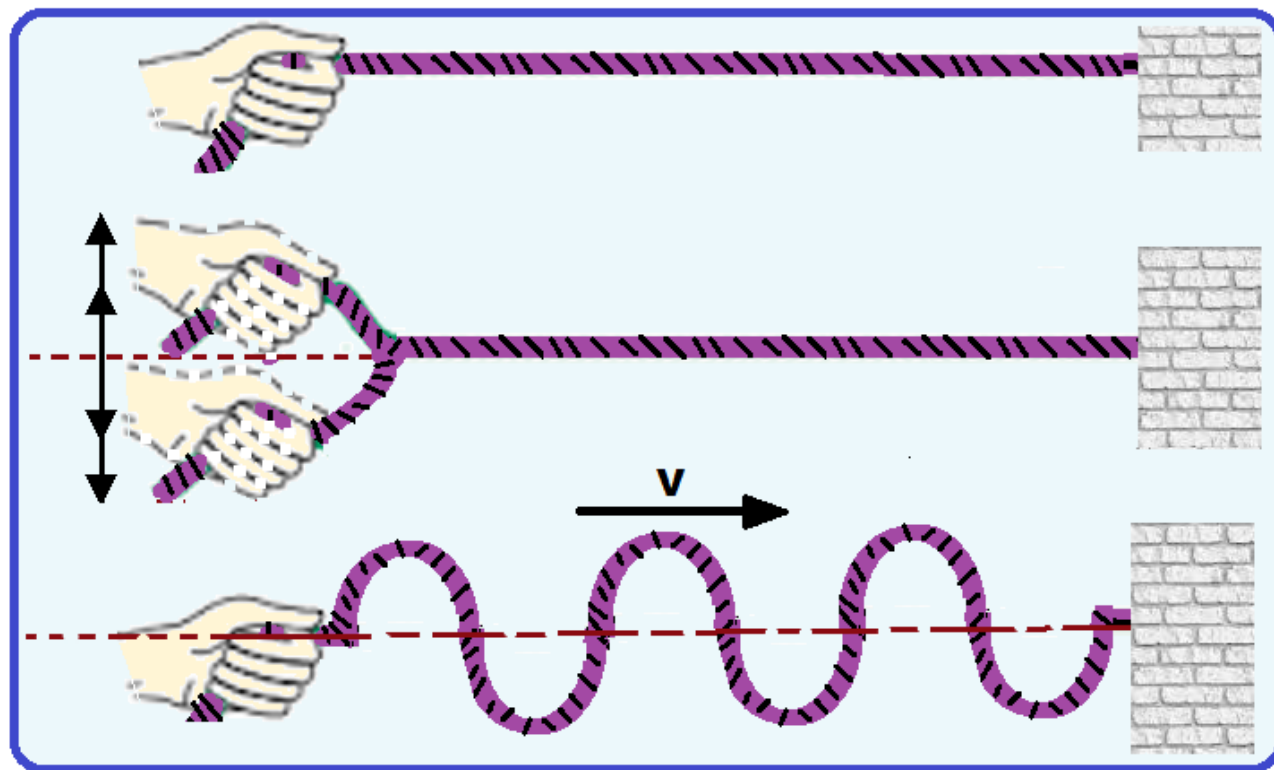


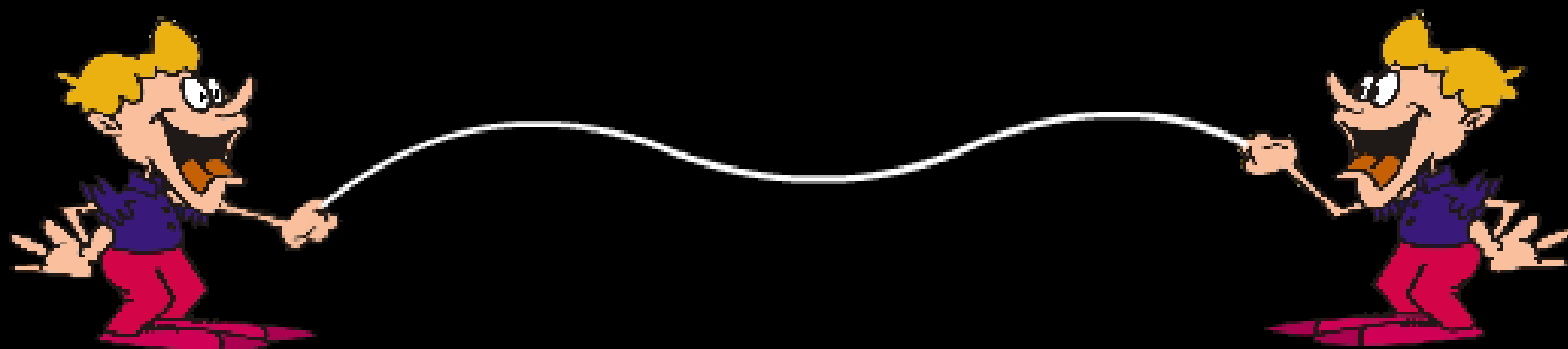
Principais Fontes de Energia

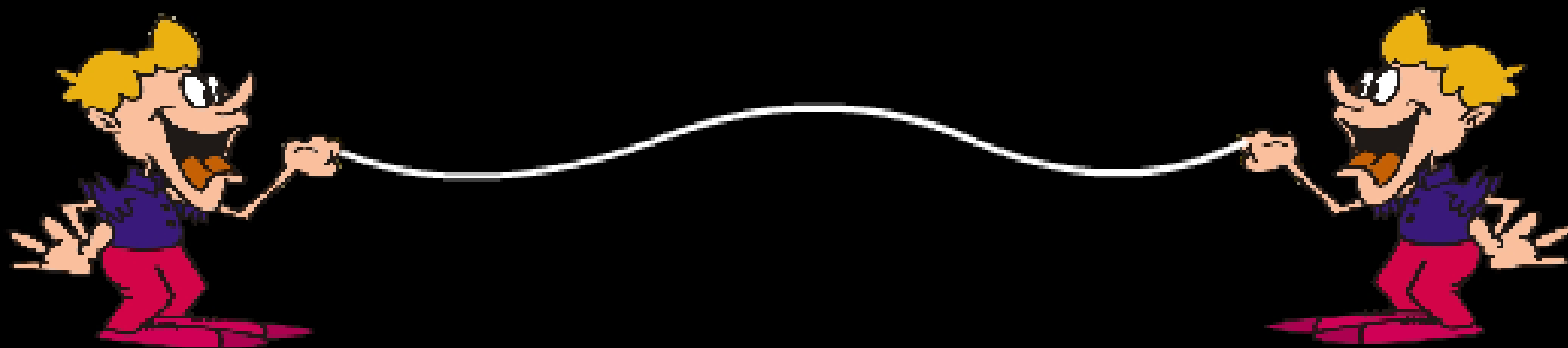
Todo corpo com temperatura acima de zero absoluto (0 K) emite energia eletromagnética

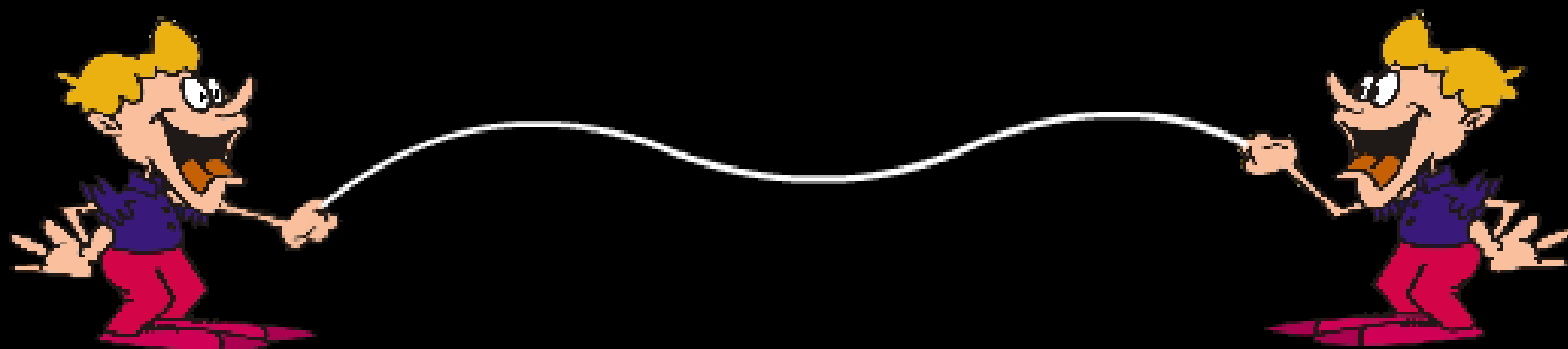




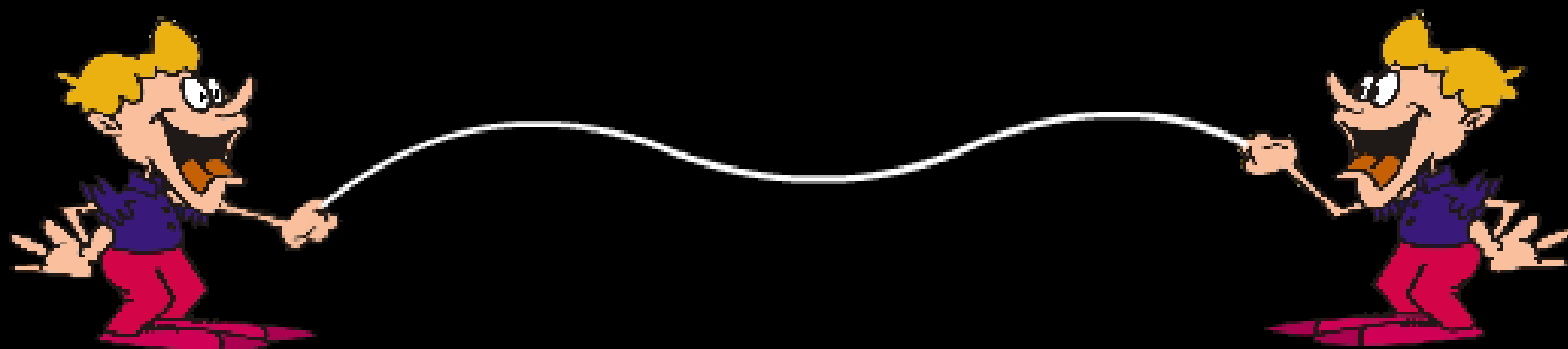


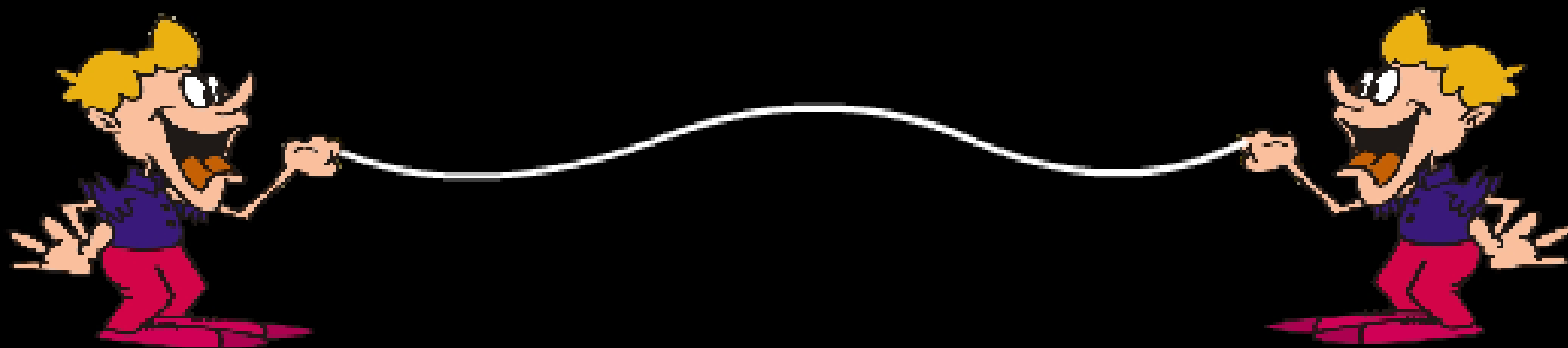


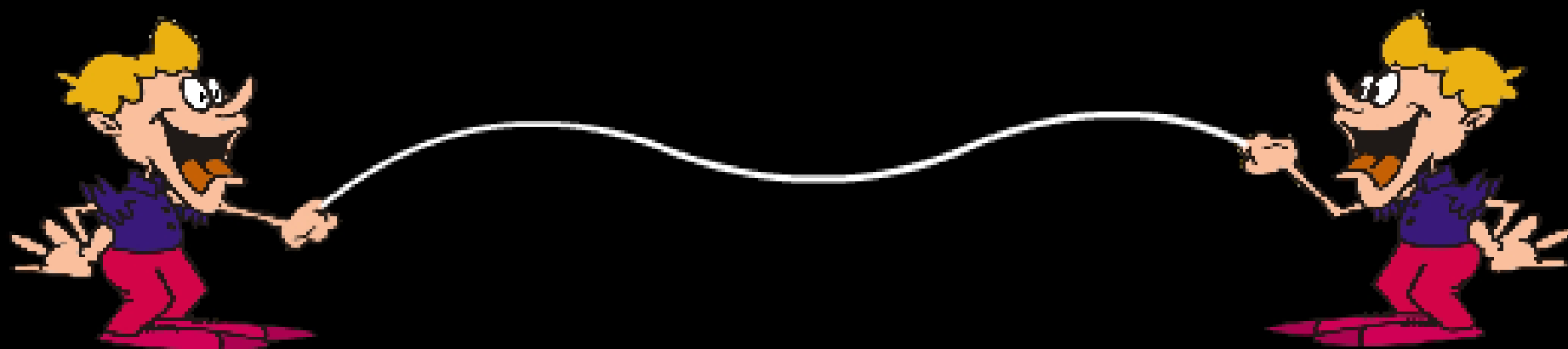


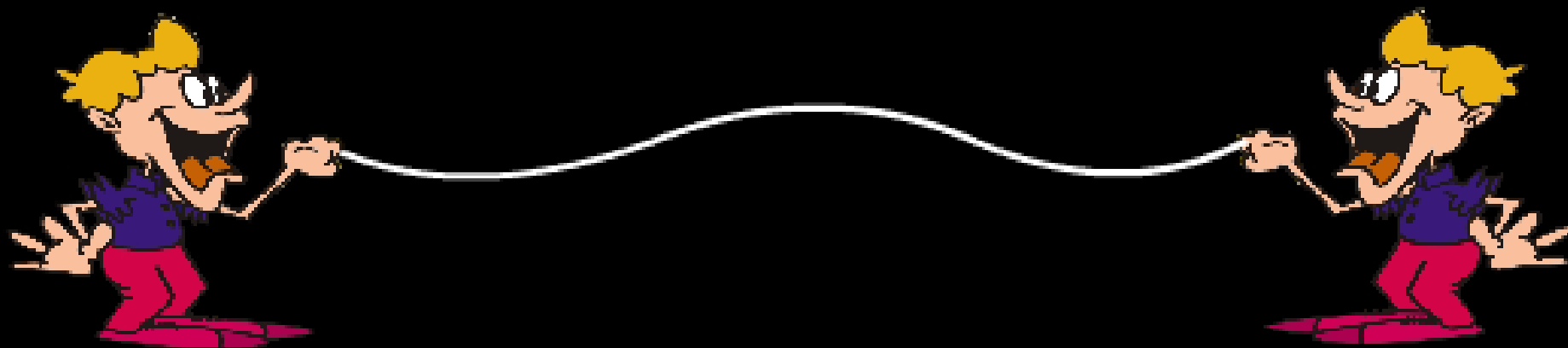








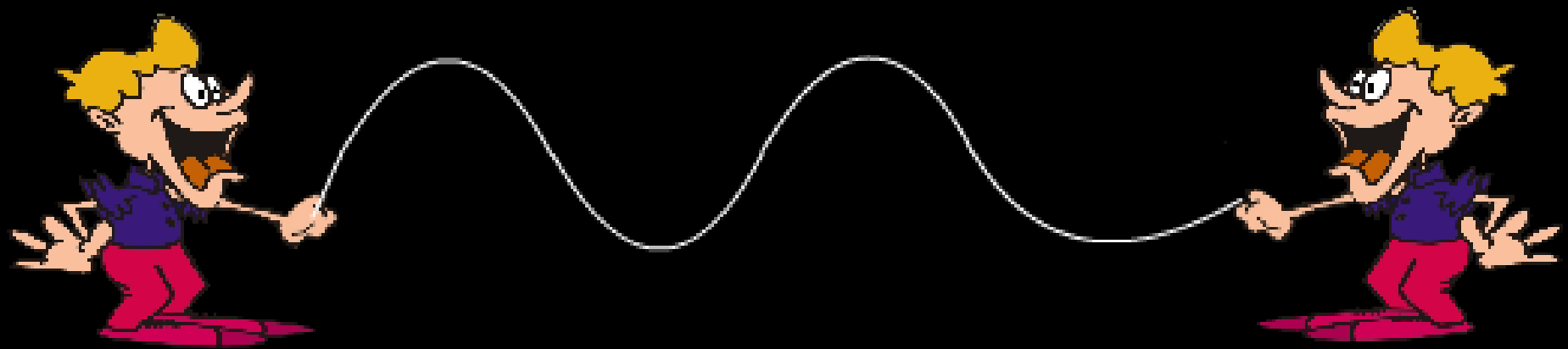


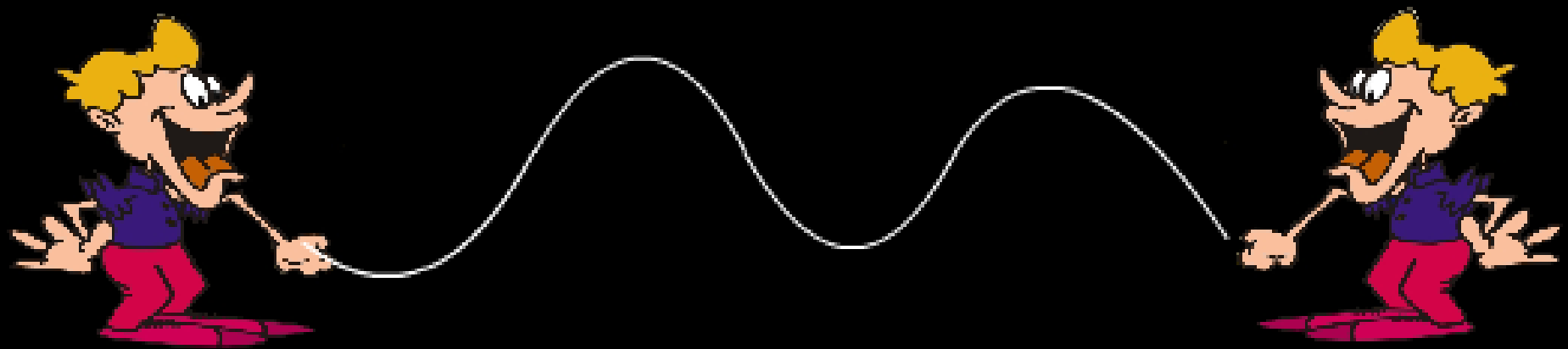


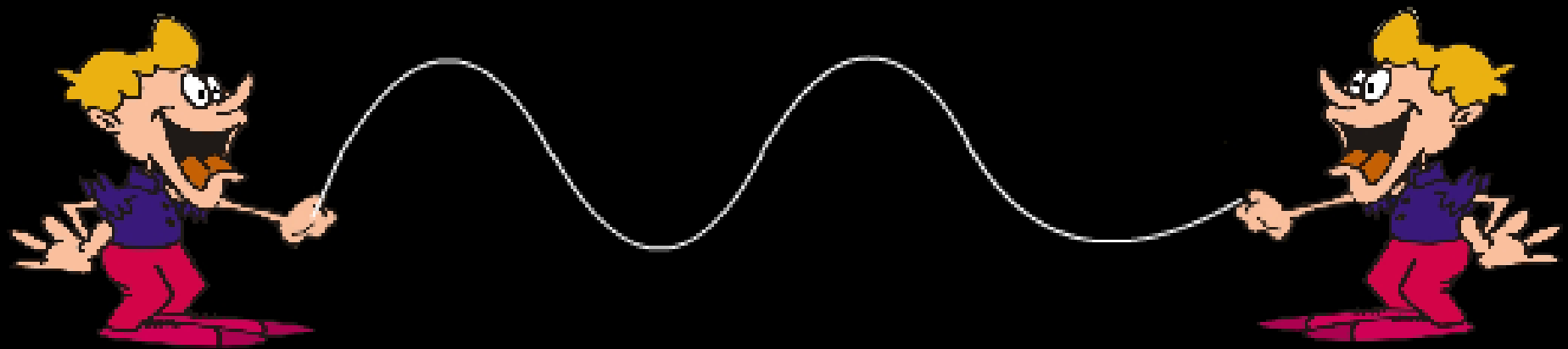
AUMENTANDO A ENERGIA NA CORDA

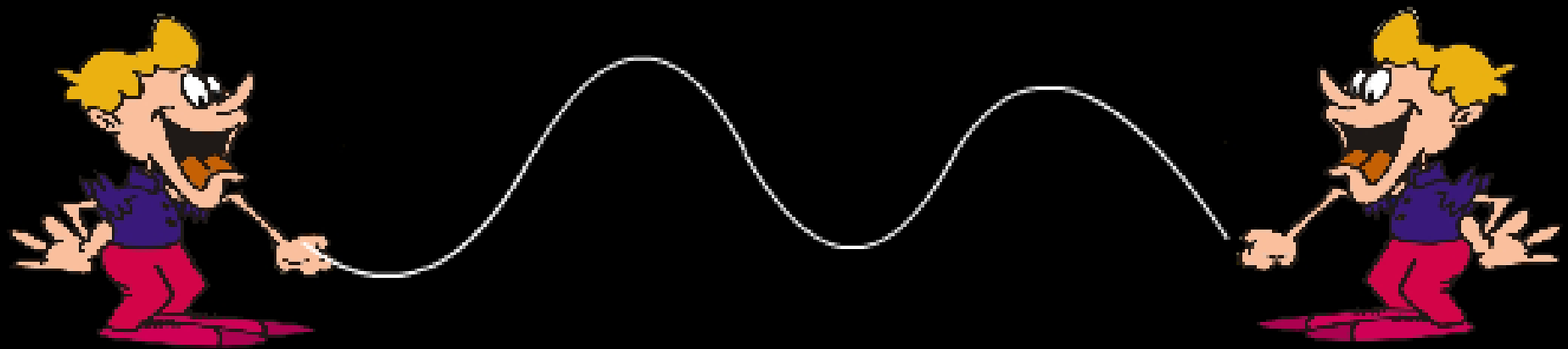
O QUE SE OBSERVA?

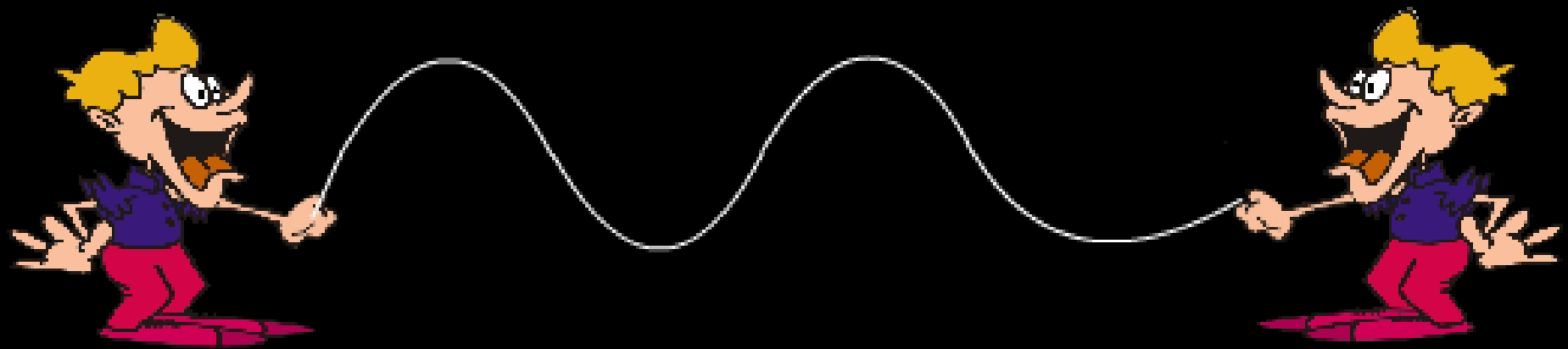


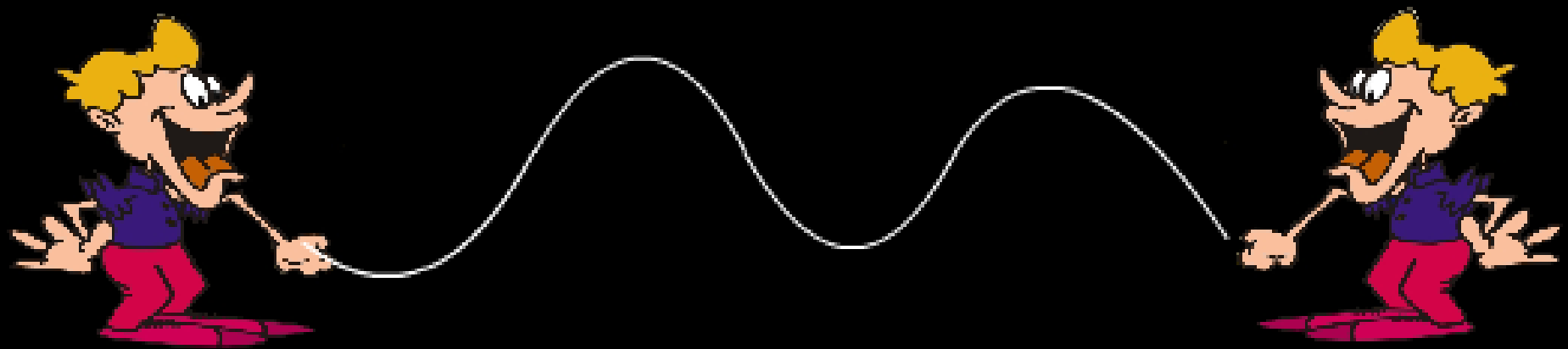


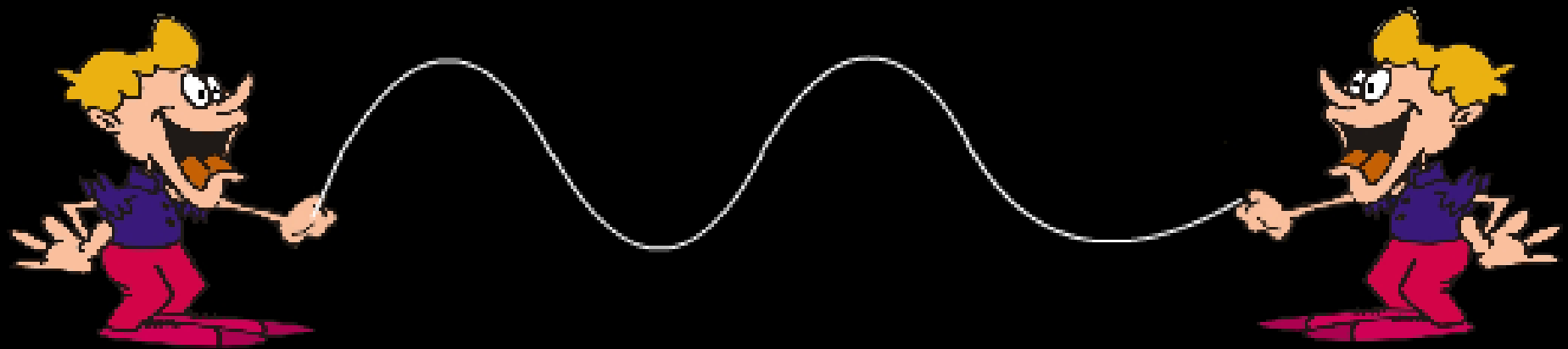


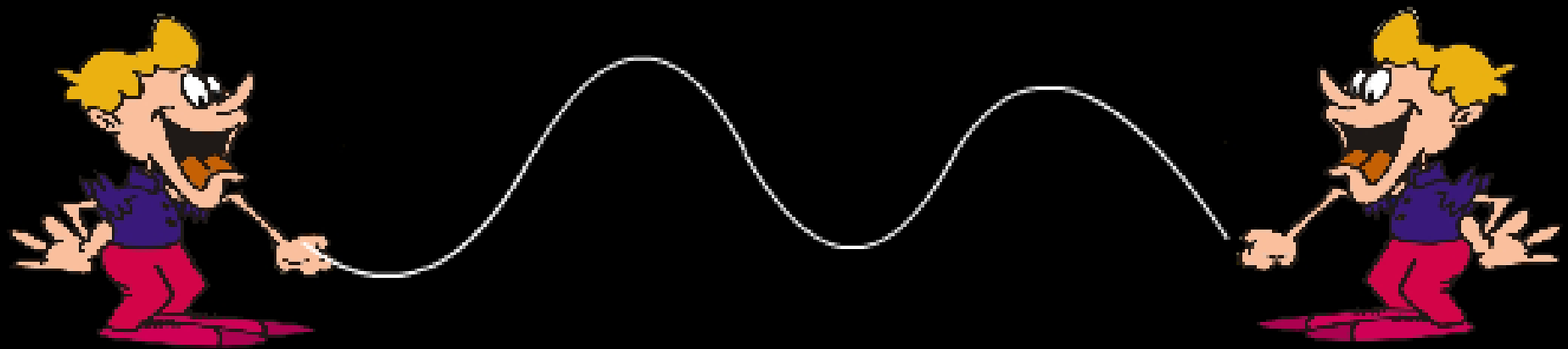


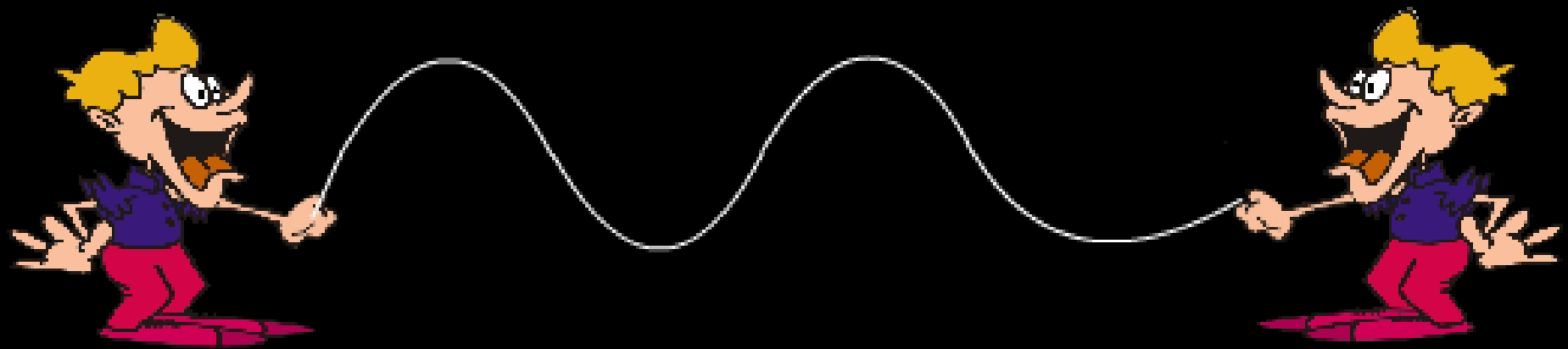


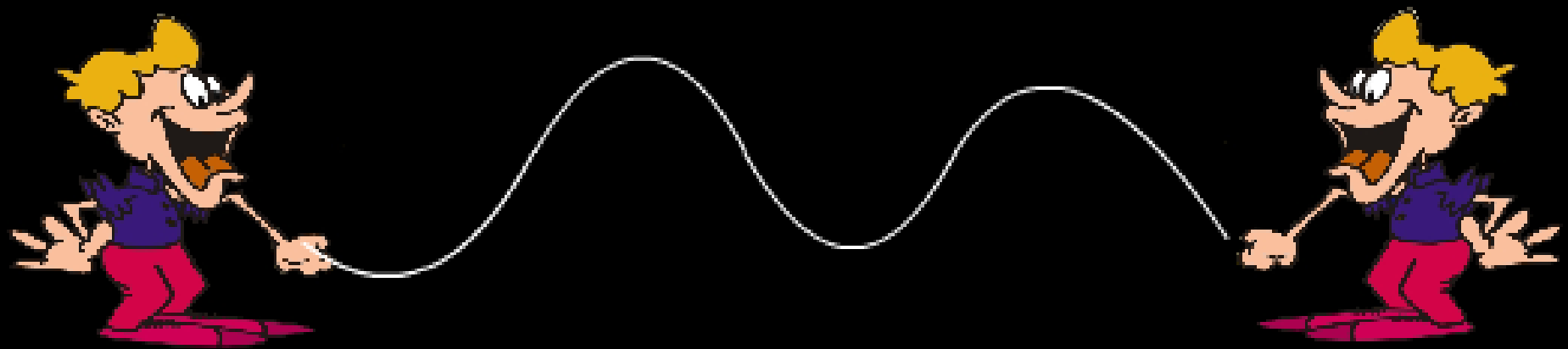


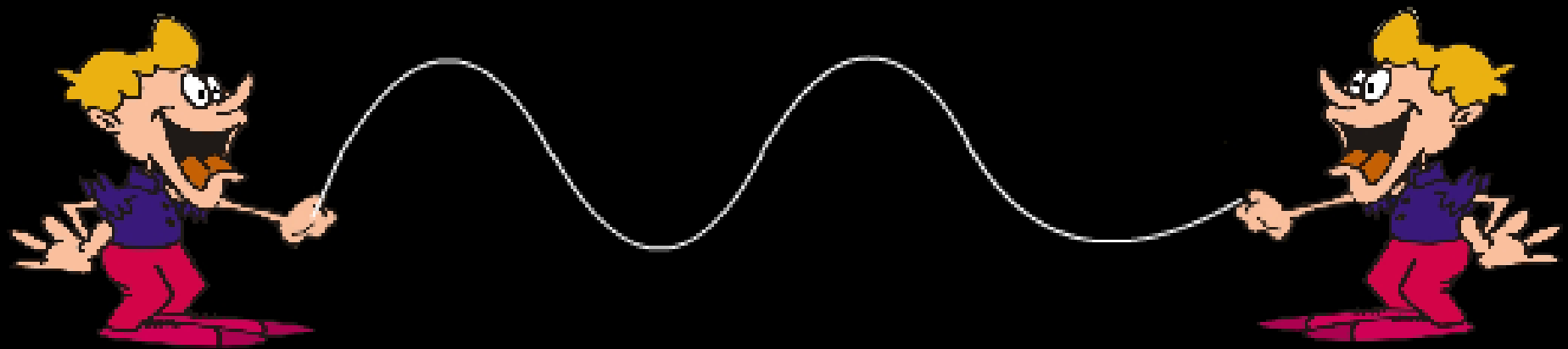


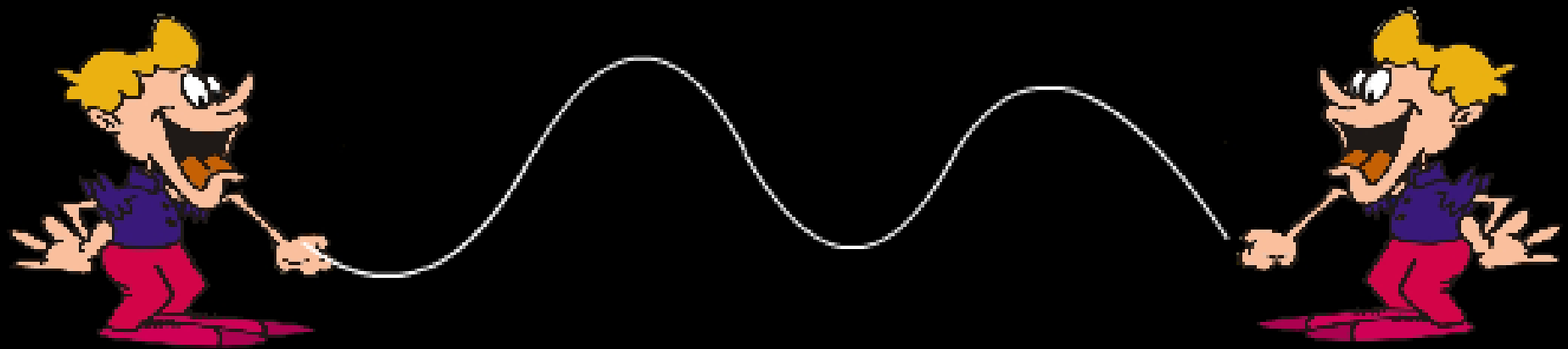












Qual a relação entre energia e frequência (f)?

$$E \propto f$$



Qual a relação entre
energia e comprimento
de onda (λ) ?

$$E \propto 1/\lambda$$



Qual a relação entre
frequência e comprimento
de onda (λ)?

$$f = c / \lambda$$

ou

$$c = f . \lambda$$



Energia da Onda Eletromagnética



$$E = h \cdot f$$

ou

$$E = h \cdot c / \lambda$$



medida da capacidade da radiação de realizar trabalho físico, de aquecer um objeto ou causar mudança de estado da matéria

Espectro Eletromagnético

Ordenação contínua da energia eletromagnética em função do comprimento de onda ou da frequência

Raios Gama Raios X Ultra-Violeta Visível Infravermelho Microondas Rádio

