Portfolio assignment 10

15 min: Perform a bivariate analysis (Pearson correlation and scatter plot) on at least 1 combination of 2 columns with numeric data in the dataset that you chose in portfolio assignment 4. Does the correlation and scatter plot match your expectations? Add your answer to your notebook. Commit the Notebook to your portfolio when you're finished.

In [1]:

```python
import pandas as pd
pokemons = pd.read_csv('../Pokemon.csv')
```

In [2]:

```python
exampleDataCorrelations = pokemons.drop(['Total', 'Generation' , 'Legendary'], axis=1).corr
exampleDataCorrelations.style.background_gradient(cmap='coolwarm', axis=None).set_precision
```

```
C:\Users\dekei\AppData\Local\Temp/ipykernel_24756/167807314.py:2: FutureWarn
ing: this method is deprecated in favour of `Styler.format(precision=..)`
  exampleDataCorrelations.style.background_gradient(cmap='coolwarm', axis=No
ne).set_precision(2)
```
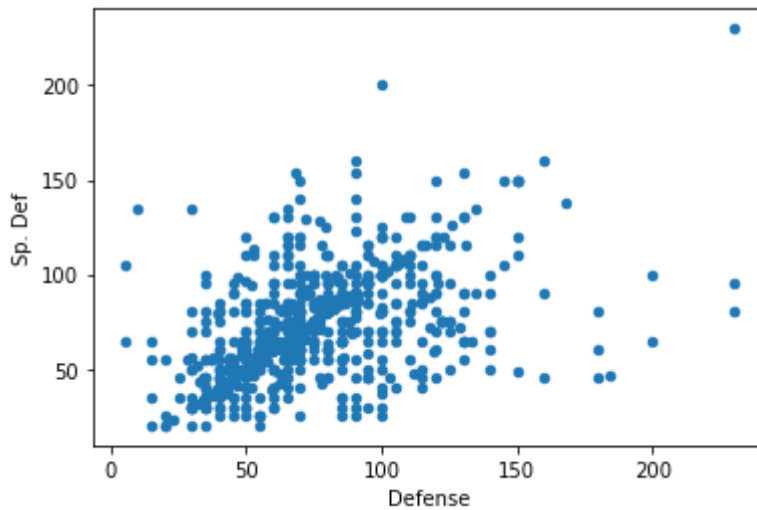
Out[2]:

	#	HP	Attack	Defense	Sp. Atk	Sp. Def	Speed
#	1.00	0.10	0.10	0.09	0.09	0.09	0.01
HP	0.10	1.00	0.42	0.24	0.36	0.38	0.18
Attack	0.10	0.42	1.00	0.44	0.40	0.26	0.38
Defense	0.09	0.24	0.44	1.00	0.22	0.51	0.02
Sp. Atk	0.09	0.36	0.40	0.22	1.00	0.51	0.47
Sp. Def	0.09	0.38	0.26	0.51	0.51	1.00	0.26
Speed	0.01	0.18	0.38	0.02	0.47	0.26	1.00

In [3]:

```python
pokemons.plot(kind='scatter', x='Defense', y='Sp. Def')
```

Out[3]:

```
<AxesSubplot:xlabel='Defense', ylabel='Sp. Def'>
```


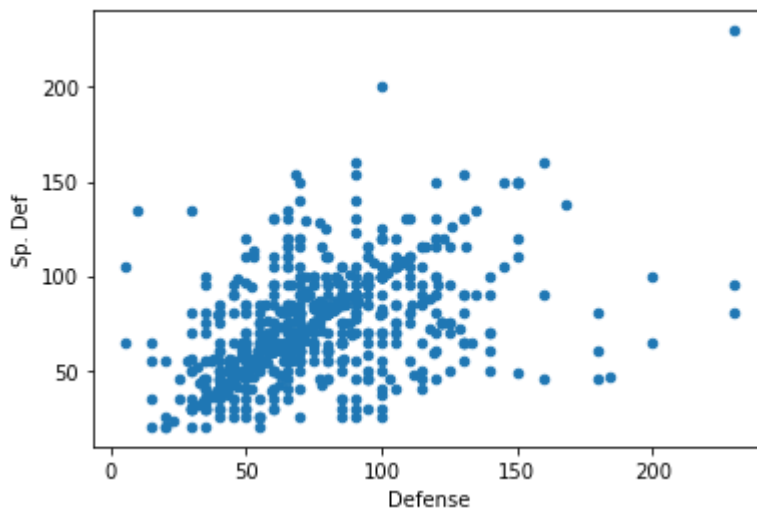In [4]:

```python
pokemons.plot(kind='scatter', x='Defense', y='Sp. Def')
```

Out[4]:

```
<AxesSubplot:xlabel='Defense', ylabel='Sp. Def'>
```


It's not a super strong correlation, but we can see that some pokemons specialize in certain stats, per instance, pokemons can be stronger in their defense stats, what means the Attack and Sp. Attack stats of the pokemon won't be that high. It is what I expected. I have a bit of backgroudn knowledge of Pokemon, and what is seen in the scatter plot matches with the concept that I had in mind